# Quality of Surface Waters of the United States, 1970

Parts 9 and 10. Colorado River Basin and The Great Basin

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 2158

Prepared in cooperation with the States of Arizona, California, Idaho, New Mexico, Utah, Wyoming, U.S. Bureau of Reclamation, and with other agencies



## UNITED STATES DEPARTMENT OF THE INTERIOR

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#### PREFACE

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# QUALITY OF SURFACE WATERS OF THE UNITED STATES, 1970

PARTS 9 and 10

#### INTRODUCTION

The water-quality investigations of the United States Geological Survey are concerned with chemical and physical characteristics of surface- and ground-water supplies of the Nation. The data herein deal with the amounts of matter in solution and in suspension in streams, and represent that part of the National Water Data System collected by the U.S. Geological Survey in cooperation with State, municipal, and other Federal agencies.

The records of chemical analysis, water temperature, and suspended sediment of surface waters given in this volume serve as a basis for determining the suitability of waters for various uses. The flow and water quality of a stream are related to variations in rainfall and other forms of precipitation. In general, lower concentrations of dissolved solids may be expected during periods of high flow than during periods of low flow. Conversely, the suspended solids in some streams may change materially with relatively small variations in flow, whereas for other streams the quality of the water may remain relatively uniform throughout large ranges in discharge.

The Geological Survey has published annual records of chemical quality, water temperature, and suspended sediment since 1941. The records prior to 1948 were published each year in a single volume for the entire country, and in two volumes in 1948 and in 1949. From 1950 to 1958, the records were published in 4 volumes; from 1959 to 1963 in 5 volumes; from 1964 to 1967 in 6 volumes; and beginning with 1968 in 10 volumes. The drainage basins covered by the 10 volumes are shown in figure 1. The shaded area in figure 1 represents the section of the country covered in this volume for the water year 1970 (October 1, 1969 to September 30, 1970).

To meet interim requirements, water-quality records have been released by the Geological Survey in annual reports, beginning with the 1964 water year, by State. These reports are entitled, "Water Resources Data for (State), Part 2. Water Quality Records." These reports are for limited distribution, and are designed primarily for local needs. Any revisions or corrections found necessary to the records published in these annual State reports have been made and published in this volume without reference.

The records herein are listed by drainage basins in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream stations. Stations on tributaries to tributaries are listed in a similar manner. In the list of water-quality stations in the front of this volume, the rank of the tributaries is indicated by indention. Each indention represents one rank.

As an added means of identification, a station number has been assigned for each stream location where regular measurements of water quantity or quality have been made. The numbers have been assigned to conform with the standard downstream order of listing gaging stations. The numbering system consists of an 8-digit number, such as 09019000. The first two digits, "09" identifies the Part or hydrologic region used by the Geological Survey for reporting hydrologic data. The next six digits is the

station number which represents the location of the station in the standard downstream order within each of the 16 parts (fig. 1). The complete number (09019000) appears just to the left of the station name. The assigned numbers are in numerical order but are not consecutive. Gaps are left in the numbers to allow for new stations that may be established.

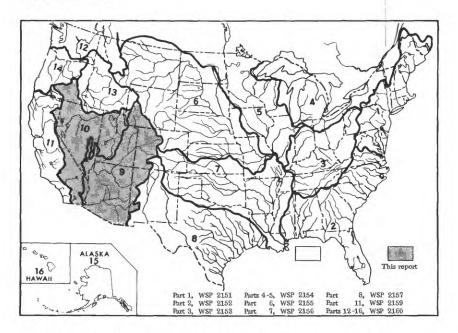


Figure 1.--Map of the United States showing basins covered by the 10 water-supply papers on quality of surface waters in 1970. The shaded part represents the section of the country covered by this volume; the unshaded part represents the section of the country covered by other water-supply papers.

Downstream order station numbers are not assigned to sites where only random water-quality samples are taken. These sites are classified as water-quality miscellaneous sites and as a means of location and identification a 15-digit number consisting of the latitude and longitude coordinates to the nearest second for each site plus a 2-digit sequential number are assigned. For example, the station number for a water-quality miscellaneous site with lat 42°28'47", long 071°41'04" would be 422847071410401.

Descriptive statements are given for each sampling station where chemical analyses, temperature measurements, or sediment determinations have been made. These statements include location of the station, drainage area, periods of records available, extremes of dissolved solids, hardness, specific conductance, temperature, sediment discharge, and other pertinent data. Records of discharge of the streams at or near the sampling station are included in most tables of analyses.

During the water year ending September 30, 1970, the Geological Survey maintained 154 stations on 88 streams for the study of chemical and physical characteristics of surface water. Samples were collected daily and monthly at 142 of these locations for chemical-quality studies. Samples also were collected less frequently at many other points. Water temperatures were measured continuously at 8 and daily at 45 stations. All surface water samples collected and analyzed during the

year have not been included. Single analyses made of daily samples before compositing have not been reported. Specific conductance is determined and reported for almost all daily samples.

For chemical-quality stations equipped with noncontinuous-digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained by writing the district office listed under Division of Work on page 22.

Quantities of suspended sediment are reported for 34 stations during the year ending September 30, 1970. Sediment samples were collected one or more times daily at most stations, depending on the rate of flow and changes in stage of the stream. Partical-size distributions of sediments were determined at 19 stations.

Some of the stations for which data are published in this volume are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

International Hydrological Decade (IHD) River Stations provide a general index of runoff and materials in the water balance (discharge of water, and dissolved and transported solids) of the world. In the United States, IHD Stations provide indices of runoff and the general distribution of water in the principal river basins of the conterminous United States and Alaska.

Irrigation network stations are water-quality stations located at or near certain streamflow gaging stations west of the main stem of the Mississippi River. Data collected at these stations are used to evaluate the chemical quality of surface waters used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to water year 1966, these data were published in the annual water-supply paper series, "Quality of Surface Waters for Irrigation, Western States."

Pesticide program is a network of regularly sampled water-quality stations where additional monthly samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Pesticides are chemical compounds used to control the growth of undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Since the first application of DDT as an insecticide in the early 1930's, there have been almost 60,000 pesticide formulations registered, each containing at least one of the approximately 800 different basic pesticide compounds (Goerlitz and Brown, 1972, p. 24). The United States annually produces about 1 billion pounds of these compounds. Although efforts are being made to substitute many of the chlorinated hydrocarbon pesticides with more specific, fast-acting, and easily degradable compounds, chlorinated hydrocarbon pesticides are still commonly used in many areas of the country.

Radiochemical program is a network of regularly sampled water-quality stations where additional samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Radioisotopes are isotope forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly exactly alike in chemical properties. The difference arises because the atoms of the

isotopic forms of an element differ in the number of neutrons in the nucleus. For example: Ordinary chlorine is a mixture of isotopes having atomic weights 35 and 37, with the natural mixture having atomic weight about 35,453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron (Rose, 1966). There are 275 isotopes of the 81 stable elements in addition to over 800 radioactive isotopes.

Radioisotopes that are determined in this program are those of uranium in micrograms per litre, radium as radium-226 in picocuries per litre, gross beta radiation as strontium/yttrium-90 in picocuries per litre, and gross alpha radiation as micrograms of uranium equivalent per litre.

A picocurie (PC/L, pCi/l) is one millionth of the amount of radioactivity represented by a microcurie, which is the quantity of radiation represented by one millionth of a gram of radium-226. A picocurie of radium results in 2.22 disintegration per minute.

#### COLLECTION AND EXAMINATION OF DATA

Quality of water stations usually are located at or near points on streams where streamflow is measured by the U.S. Geological Survey. The concentration of solutes and sediments at different locations in the stream-cross section may vary widely with different rates of water discharge depending on the source of the material and the turbulence and mixing of the stream. In general, the distribution of sediment in a stream section is much more variable than the distribution of solutes. It is necessary to sample some streams at several verticals across the channel and especially for sediment, to uniformly traverse the depth of flow. These measurements require special sampling equipment to adequately integrate the vertical and lateral variability of the concentration in the section. These procedures yield a velocity-weighted mean concentration for the section.

The near uniformly dispersed ions of the solute load move with the velocity of the transporting water. Accordingly, the mean section concentration of solutes determined from samples is a precise measure of the total solute load. The mean section concentration obtained from suspended sediment samples is a less precise measure of the total sediment discharge, because the sediment samplers do not traverse the bottom 0.3 foot of the sampling vertical where the concentration of suspended sediment is greatest and because a significant part of the coarser particles in many streams usually move in continuous contact with the bed and are not represented in the suspended sediment sample. Hence, the computed sediment discharges presented in this report are usually less than the total sediment discharges. For most streams the difference between the computed and total sediment discharges will be small, in the order of a few percent.

#### CHEMICAL QUALITY

The methods of collecting and compositing water samples for chemical analysis are described by Brown, Skougstad, and Fishman (1970). No single method of compositing samples is applicable to all problems related to the study of water quality. Composites are made on the basis of dissolved-solids content as indicated by measurements of conductivity of daily samples, supplemented by other information such as chloride content, river stage, weather conditions, and other background information of the stream.

### TEMPERATURE

Daily water temperatures were measured at most of the stations at the time samples were collected for chemical quality or sediment content. So far as practicable, the water temperatures were taken at about the same time each day. Large streams have a small diurnal temperature change while small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day, and the monthly averages.

#### SEDIMENT

In general, suspended-sediment samples were collected daily with depth-integrating samplers (U.S. Inter-Agency, 1963). At some stations, samples were collected at a fixed sampling point at one vertical in the cross section. Depth-integrated samples were collected periodically at three or more verticals in the cross section to determine the cross-sectional distribution of the concentration of suspended sediment with respect to that at the daily sampling vertical. In streams where transverse distribution of sediment concentration ranged widely, samples were taken at two or more verticals to define more accurately the average concentration of the cross section. During periods of high or rapidly changing flow, samples generally were taken several times a day and, in some instances, hourly.

Sediment concentrations were determined by filtration-evaporation method. At many stations the daily mean concentration for some days was obtained by plotting the velocity-weighted instantaneous concentrations on the gage-height chart. The plotted concentrations, adjusted if necessary, for cross-sectional distribution were connected or averaged by continuous curves to obtain a concentration graph. This graph represented the estimated velocity-weighted concentration at any time, and for most periods daily mean concentrations were determined from the graph. The days were divided into shorter intervals when either the concentration or water discharge was changing rapidly. During some periods of minor variation in concentration, the average concentration of the samples was used as the daily mean concentration. During extended periods of relatively uniform concentration and flow, samples for a number of days were composited to obtain average concentrations and average daily sediment discharges for each period. (See Expression of Results, p. 7.)

For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment discharges for other periods of similar water discharge. The estimates were further guided by precipitation records and sediment discharge at other stations in the same or adjacent basins.

In many instances where there were no observations for several days, the suspended-sediment discharges for individual days were not estimated, because numerous factors influencing the quantities of transported sediment made it very difficult to make accurate estimates for individual days. However, estimated discharges of suspended sediment for missing days in an otherwise continuous period of sampling have been included in monthly and annual totals in order to provide a complete record. For some streams, samples were collected weekly, monthly, or less frequently, and only rates of sediment discharge at the time of sampling are shown.

In addition to the records of quantities of suspended sediment transported, records of particle sizes of sediment are included. The particle sizes of suspended sediment for many of the stations, and the particle sizes of the bed material for some of the stations were determined intermittently.

The size of particles carried in suspension by streams commonly ranges from colloids (finer than about 0.24 microns) to coarse sand (2.0 mm). The common methods of particle-size analysis cannot accommodate such a wide range. Hence, it was necessary to separate most samples into two parts, that part coarser than 0.062 mm and that part finer than 0.062 mm. The separations were made by sieve or by fall velocity technique. The coarse fractions were classified by sieve separation or by visual-accumulation tube (U.S. Inter-Agency, 1957). The fine fractions were classified by the pipet method (Kilmer and Alexander, 1949) or the bottom withdrawal tube method (U.S. Inter-Agency, 1943).

#### EXPRESSION OF RESULTS

The quantities of solute concentrations analyzed in the laboratory are measured in either milligrams per litre or micrograms per litre. Milligrams per litre (mg/l, MG/L) is a unit which represents the weight of solute per unit volume of water. A microgram per litre ( $\mu$ g/l, UG/L) is one thousandth of a milligram per litre.

Milliequivalents per litre are not reported but they can be converted easily from milligrams per litre data. A milliequivalent per litre (me/l) is one thousandth of a gram equivalent weight of a constituent. Chemical equivalence in milliequivalents per litre can be obtained by (a) dividing the concentration in milligrams per litre by the combining weight of that ion, or (b) by multiplying the concentration (in mg/l) by the reciprocals of the combining weights. Table l on page 6, lists the reciprocals of the combining atomic weights based on carbon-12 (International Union of Pure and Applied Chemistry, 1961).

The hardness of water is conventionally expressed in all water analyses in terms of an equivalent quantity of calcium carbonate. Such a procedure is required because hardness is caused by several different cations, present in variable proportions. It should be remembered that hardness is an expression in conventional terms of a property of water. The actual presence of calcium carbonate in the concentration given is not to be assumed. The hardness caused by calcium and magnesium (and other cations if significant) equivalent to the carbonate and bicarbonate is called carbonate hardness; the hardness in excess of this quantity is called noncarbonate hardness. Hardness or alkalinity values expressed in milligrams per litre as calcium carbonate may be converted to milliequivalents per litre by dividing by 50.

The value usually reported as dissolved solids is the residue on evaporation after drying at  $180^{\circ}\text{C}$  for 1 hour. For some waters, particularly those containing moderately large quantities of soluble salts, the value reported is calculated from the quantities of the various determined constituents using the carbonate equivalent of the reported bicarbonate. The calculated sum of the constituents may be given instead of or in addition to the residue. In the analyses of most waters used for irrigation, the quantity of dissolved solids is given in tons per acre-foot as well as in milligrams per litre.

Table 1.--Factors for conversion of chemical constituents in milligrams per litre to milliequivalents per litre

Ion	MuIti- ply by	Ion	Multi- ply by
Aluminum $(A1+3)^*$	0.11119	Iodide $(I^{-1})$	0.00788
Ammonia as NH+1	.05544	Iron $(Fe^{+3})^*$	.05372
Arsenic (As+3)*	.04004	Lead (Pb+2)*	.00965
Barium (Ba+2)	.01456	Lithium (Li+1)	.14411
Bicarbonate ( $HCO_3^{-1}$ )	.01639	Magnesium (Mg+2)	.08226
Bromide $(Br^{-1})$	.01251	Manganese (Mn+2)*	.03640
Cadmium $(Cd^{+2})^*$	.01779	Mercury (Hg+2)*	.00997
Calcium (Ca $^{+2}$ )	.04990	Nickel (Ni+2)*	.03406
Carbonate $(CO_3^{-2})$	.03333	Nitrate $(NO_3^{-1})$	.01613
Chloride (Cl <sup>-1</sup> )	.02821	Nitrite $(NO_2^{-1})$	.02174
Chromium (Cr+6)*	.11539	Phosphate (PO <sub>4</sub> -3)	.03159
Cobalt (Co+2)*	.03394	Potassium (K+1)	.02557
Copper (Cu <sup>+2</sup> )*	.03148	Sodium $(Na^{+1})$	.04350
Cyanide (CN <sup>-1</sup> )	.03844	Strontium $(Sr^{+2})^*$	.02283
Fluoride $(F^{-1})$	.05264	Sulfate $(SO_4^{-2})$	.02082
Hydrogen $(H^{+1})$	.99209	Sulfide $(S^{-2})$	.06238
Hydroxide (OH <sup>-1</sup> )	.05880	Zinc $(Zn^{+2})^*$	.03060

<sup>\*</sup>Constituent reported in micrograms per litre; multiply by factor and divide results by 1,000  $\,$ 

Specific conductance is given for most analyses and was determined by means of a conductance bridge and using a standard potassium chloride solution as reference, Specific conductance values are expressed in micromhos per centimetre at 25°C. Specific conductance in micromhos is 1 million times the reciprocal of specific resistance at 25°C. Specific resistance is the resistance in ohms of a column of water 1 centimetre long and 1 square centimetre in cross section.

The discharge of the streams is reported in cubic feet per second (see Streamflow, p. 20) and the temperature in degrees Celsius (°C). Color is expressed in units of the platinum-cobalt scale proposed by Hazen (1892). A unit of color is produced by one milligram per litre of platinum in the form of the chloroplatinate ion. Hydrogenion concentration is expressed in terms of pH units. By definition the pH value of a solution is the negative logarithm of the concentration of gram ions of hydrogen.

An average of analyses for the water year is given for most daily sampling stations. Most of these averages are arithmetical, time-weighted, or discharge-weighted; when analyses during a year are all on 10-day composites of daily samples with no missing days, the arithmetical and time-weighted averages are equivalent. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the river each day for the water year. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all of the water passing a given station during the year. A discharge-weighted average is computed by multiplying the discharge for the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. For most streams, discharge-weighted averages are lower than arithmetical averages because at times of high discharge the rivers generally have low concentrations of dissolved solids.

A program for computing these averages by digital computer was instituted in the 1962 water year. This program extended computations to include averages for pH values expressed in terms of hydrogen ion and averages for the concentration of individual constituents expressed in tons per day. Concentrations in tons per day are computed the same as daily sediment discharges.

The concentration of sediment in milligrams per litre is computed as 1,000,000 times the ratio of the weight of sediment to the weight of water-sediment mixture. Daily sediment discharges are expressed in tons per day and except for subdivided days, are usually obtained by multiplying daily mean sediment concentrations in mg/l by the daily mean discharge in cubic feet per second, and the conversion factor, normally 0.0027.

For those days when the published sediment discharge value differs from the value computed, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method.

Particle-size analyses are expressed in percentages of material finer than classified sizes (in millimetres). The size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	.004062	Sedimentation
Sand	.062 - 2.0	Sedimentation or sieve
Gravel	20 - 640	Sieve

The particle-size distributions given in this report are not necessarily representative of all the particle sizes of sediment in transport in the natural stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis (Guy 1969).

Prior to the 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures

were reported in degrees Fahrenheit (°F). In October 1967, the U.S. Geological Survey began reporting data for chemical constituents and concentrations of suspended sediment in milligrams per litre (mg/l) and water temperatures are given in degrees Celsius (°C). In waters with a density of 1.000 g/ml (grams per millilitre), milligrams per litre and parts per million can be considered equal. In waters with a density greater than 1.000 g/ml, values in milligrams per litre should be divided by the density to convert to parts per million. (See table 2 on page 9.) Temperature in degrees Celsius may be converted to degrees Fahrenheit by using table 3 on page 9.

#### COMPOSITION OF SURFACE WATERS

All natural waters contain dissolved mineral matter. The quantity of dissolved mineral matter in a natural water depends primarily on the type of rocks or soils with which the water has been in contact and the length of time of contact. Ground water is generally more highly mineralized than surface runoff because it remains in contact with the rocks and soils for much longerperiods. Some streams are fed by both surface runoff and ground water from springs or seeps. Such streams reflect the chemical character of their concentrated underground sources during dry periods and are more dilute during periods of heavy rainfall. The dissolved-solids content in a river is frequently increased by drainage from mines or oil fields, by the addition of industrial or municipal wastes, or--in irrigated regions--by drainage from irrigated lands.

The mineral constituents and physical properties of natural waters reported in the tables of analyses include those that have a practical bearing on water use. The results of analyses generally include silica, iron, calcium, magnesium, sodium, potassium (or sodium and potassium together calculated as sodium), carbonate, bicarbonate, sulfate, chloride, fluoride, nitrate, boron, pH, dissolved solids, and specific conductance. Aluminum, manganese, color, acidity, dissolved oxygen, and other dissolved constituents and physical properties are reported for certain streams. Microbiologic (coliforms) and organic components (pesticides, total organic carbon) and minor elements (arsenic, cobalt, cadmium, copper, lead, mercury, nickel, strontium, zinc, etc.) are determined occasionally for some streams in connection with specific problems and the results are reported. The source and significance of the different constituents and properties of natural waters are discussed in the following paragraphs. The constituents are arranged in the order that they appear in the tables.

#### MINERAL CONSTITUENTS IN SOLUTION

Silica (SiO<sub>2</sub>)

Silica is dissolved from practically all rocks. Some natural surface waters contain less than 5 milligrams per litre of silica and few contain more than 50~mg/l, but the more common range is from 10~to~30~mg/l. Silica affects the usefulness of a water because it contributes to the formation of boiler scale; it usually is removed from feed water for high-pressure boilers. Silica also forms troublesome deposits on the blades of steam turbines. However, it is not physiologically significant to humans, livestock, or fish, nor is it of importance in irrigation water.

#### Aluminum (Al)

Aluminum is usually present only in negligible quantities in natural waters except in areas where the waters have been in contact with the more soluble rocks of high aluminum content such as bauxite and certain shales. Acid waters often contain large amounts of aluminum. It may be troublesome in feed waters where it tends to be deposited as a scale on boiler tubes.

#### Iron (Fe)

Iron is dissolved from many rocks and soils. On exposure to air, normal basic waters that contain more than 1 mg/l of iron soon become turbid with the insoluble reddish

Table 2.--Factors for conversion of sediment concentration in milligrams per litre to parts per million\*

(All values calculated to three significant figures)

Range of Range of Range of Range of concenconcenconcenconcen-Di-Di-Di~ Ditration tration tration tration in 1000 vide in 1000 vide in 1000 vide in 1000 vide mg/l by mg/1 mg/l by mg/l by by 0 1.00 201-217 1.13 411-424 1.26 619-634 1.39 8 8.05- 24 218-232 427-440 1.27 636-650 1.40 1.01 1.14 24.2 - 40 1.02 234-248 1.15 443-457 1.28 652-666 1.41 40.5 - 561.03 250-264 1.16 460-473 1.29 668-682 1.42 56.5 - 72 1.04 266-280 1.17 476-489 1.30 684-698 1.43 72.5 - 88 1.05 282-297 1.18 492-506 1.31 700-715 1.44 88.5 -104 1.06 299-313 1.19 508-522 1.32 717-730 1.45 1.20 105 -120 1.07 315-329 524-538 1.33 732-747 1.46

1.21

1.22

1,23

1.24

1.25

540-554

556-570

572-585

587-602

604-617

1.34

1.35

1.36

1.37

1.38

749-762

765-780

78**2-**796

798-810

1.47

1.48 1.49

1.50

-136

-152

-169

-185

- 200

121

137

153

170

186

1.08

1.09

1.10

1.11

1.12

331-345

347-361

363-378

380-393

395-409

Table 3.--Degrees Celsius (°C) to degrees Fahrenheit (°F)\* (Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0 0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	<b>2</b> 0.5	69	30.5	87	40.5	105
1.0	34	11.0	5 <b>2</b>	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	<b>22</b> .0	72	<b>32.</b> 0	90	42.0	108
2.5	36	1 <b>2.</b> 5	54	22.5	72	3 <b>2.</b> 5	90	<b>42.</b> 5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	<b>2</b> 3.5	74	33.5	92	43.5	110
4.0	39	14.0	57	<b>24.</b> 0	75	34.0	93	44.0	111
4.5	40	14.5	58	<b>24</b> .5	76	34.5	94	44.5	112
5.0	41	15.0	59	<b>2</b> 5.0	77	35.0	95	45.0	113
5.5	42	15.5	60	<b>2</b> 5.5	78	35.5	96	45.5	114
6.0	43	16.0	61	<b>2</b> 6.0	79	36.0	97	46.0	115
6.5	44	16.5	6 <b>2</b>	<b>2</b> 6.5	80	36.5	98	46.5	116
7.0	45	17.0	63	<b>2</b> 7.0	81	37.0	99	47.0	117
7.5	45	17.5	63	<b>2</b> 7.5	81	37.5	99	47.5	117
8.0	46	18.0	64	<b>2</b> 8.0	8 <b>2</b>	38.0	100	48.0	118
8.5	47	18.5	65	<b>2</b> 8.5	83	38.5	101	48.5	119
9.0	48	19.0	66	<b>2</b> 9.0	84	39.0	102	49.0	120
9.5	49	19.5	67	<b>2</b> 9.5	85	39.5	103	49.5	121

<sup>\*</sup>C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.

<sup>\*</sup>Based on water density of 1.000 g/ml and a specific gravity of sediment of 2.65 g/cc.

ferric compounds produced by oxidation. Surface waters, therefore, seldom contain as much as 1 mg/l of dissolved iron, although some acid waters carry large quantities of iron in solution. Iron causes reddish-brown stains on porcelain or enameled ware and fixtures and on fabrics washed in the water. The highest desirable level of concentrations of iron in culinary and drinking-water is 0.1 mg/l (100  $\mu \mathrm{g}/\mathrm{l})$  with a maximum permissible level of 1.0 mg/l (1,000  $\mu \mathrm{g}/\mathrm{l})$ . (International Standards for Drinking-Water (ISD-W), 1971).

#### Manganese (Mn)

Manganese is dissolved in appreciable quantities from rocks in some sections of the country. It resembles iron in its chemical behavior and in its occurrence in natural waters. However, manganese in rocks is less abundant than iron. As a result the concentration of manganese is much less than that of iron and is not regularly determined in many areas. It is especially objectionable in water used in laundry work and in textile processing. Concentrations as low as 0.2 mg/l (200  $\mu$ g/l) may cause a dark-brown or black stain on fabrics and porcelain fixtures. Appreciable quantities of manganese are often found in waters containing objectionable quantities of iron.

#### Calcium (Ca)

Calcium is dissolved from almost all rocks and soils, but the highest concentrations are usually found in waters that have been in contact with limestone, dolomite, and gypsum. Calcium and magnesium make water hard and are largely responsible for the formation of boiler scale. Most waters associated with granite or silicious sands contain less than 10 mg/l of calcium; waters in areas where rocks are composed of dolomite and limestone contain from 30 to 100 mg/l; and waters that have come in contact with deposits of gypsum may contain several hundred mg/l.

#### Magnesium (Mg)

Magnesium is dissolved from many rocks, particularly from dolomitic rocks. Its effect in water is similar to that of calcium. The magnesium in soft waters may amount to only 1 or 2 mg/l, but water in areas that contain large quantities of dolomite or other magnesium-bearing rocks may contain from 20 to 100 mg/l or more of magnesium.

#### Sodium and potassium (Na and K)

Sodium and potassium are dissolved from practically all rocks. Sodium is the predominant cation in some of the more highly mineralized waters found in the western United States. Natural waters that contain only 3 or 4 mg/l of the two together are likely to carry almost as much potassium as sodium. As the total quantity of these constituents increases, the proportion of sodium becomes much greater. Moderate quantities of sodium and potassium have little effect on the usefulness of the water for most purposes, but waters that carry more than 50 to 100 mg/l of the two may require careful operation of steam boilers to prevent foaming. More highly mineralized waters that contain a large proportion of sodium salts may be unsatisfactory for irrigation.

## Bicarbonate, carbonate and hydroxide ( $HCO_3$ , $CO_3$ , OH)

Bicarbonate, carbonate, or hydroxide is sometimes reported as alkalinity. The alkalinity of a water is produced by anions or molecular species of weak acids which are not fully dissociated above a pH of 4.5. Since the major causes of alkalinity in most natural waters are carbonate and bicarbonate ions dissolved from carbonate rocks, the results are usually reported in terms of these constituents. Although alkalinity may suggest the presence of definite amounts of carbonate, bicarbonate or hydroxide, there are other ions that contribute to alkalinity such as silicates, phosphates, borates, possibly fluoride, and certain organic anions which may occur in colored waters. The significance of alkalinity to the domestic, agricultural, and industrial user is usually dependent upon the nature of the cations (Ca, Mg, Na, K) associated with it. Alkalinity in moderate amounts does not adversely affect most users.

Hydroxide may occur in water that has been softened by the lime process. Its presence in streams usually can be taken as an indication of contamination and does not represent the natural chemical character of the water.

#### Sulfide (S)

Sulfide occurs in water as a result of bacterial and chemical processes. It usually is present as hydrogen sulfide. Variable amounts may be found in waters receiving sewage and (or) industrial wastes, such as from tanneries, papermills, chemical plants, and gas manufacturing work (California State Water Quality Control Board, 1963).

Waters containing sulfides, especially hydrogen sulfide, may be considered undesirable because of their odor. The toxicity to aquatic organisms differs significantly with the species and the nature of associated ions.

## Sulfate (SO₄)

Sulfate is dissolved from most sedimentary rocks. Large quantities may be derived from beds of gypsum, sodium sulfate deposits, and some types of shale. Organic material containing sulfur adds sulfate to the water as a phase of the sulfur cycle. In natural waters, concentrations range from a few mg/l to several thousand mg/l.

ISD-W (1971) recommends 200 mg/l as the highest desirable level of sulfate concentration in drinking and culinary water.

Sulfates are less toxic to crops than chlorides.

#### Chloride (Cl)

Chloride is dissolved from rock materials in all parts of the country. Surface waters in the humid regions are usually low in chloride, whereas streams in arid or semiarid regions may contain several hundred mg/l of chloride leached from soils and rocks, especially where the streams receive return drainage from irrigated lands or are affected by ground-water inflow carrying appreciable quantities of chloride. Large quantities of chloride in water that contains a high content of calcium and magnesium increases the water's corrosiveness. The presence of abnormal concentrations of chloride and nitrogenous material together in water supplies indicates possible pollution by human or animal wastes.

### Fluoride (F)

Fluoride has been reported as being present in some rocks to about the same extent as chloride. However, the quantity of fluoride in natural surface waters is ordinarily very small compared to that of chloride. Investigations have proved that fluoride concentrations of about 0.6 to 1.7 mg/l reduced the incidence of dental caries and that concentrations greater than 1.7 mg/l also protect the teeth from cavities but cause an undesirable black stain (Durfor and Becker, 1964, p. 20). Public Health Service, 1962, states, "When fluoride is naturally present in drinking water, the concentration should not average more than the appropriate upper control limit (0.6 to 1.7 mg/l). Presence of fluoride in average concentration greater than two times the optimum values shall constitute grounds for rejection of the supply." Concentration higher than the stated limits may cause mottled enamel in teeth, endemic cumulative fluorosis, and skeletal effects.

#### Bromide (Br)

Bromine is a very minor element in the earth's crust and is normally present in surface waters in only minute quantities. Measurable amounts may be found in some streams that receive industrial wastes, and some natural brines may contain rather high concentrations. It resembles chloride in that it tends to be concentrated in sea water.

## lodide (I)

lodide is considerably less abundant both in rocks and water than bromine. Measurable amounts may be found in some streams that receive industrial wastes, and some natural brines may contain rather high concentrations. It occurs in sea water to the extent of less than 1 mg/l. Rankama and Sahama (1950) report iodide present in rainwater to the extent of 0.001 to 0.003 mg/l and in river water in about the same amount. Few waters will contain over 2.0 mg/l.

Nitrogen, organic (N)

Organic nitrogen includes all nitrogenous organic compounds, such as amino acid, polypeptides, and proteins. It is present naturally in all surface waters as the result of inflow of nitrogenous products from the watershed and the normal biological life of the stream,

Organic nitrogen is not pathologically significant but is sometimes an indication of pollution,

Nitrogen, ammonia (NH<sub>4</sub>, as N)

Ammonia nitrogen includes nitrogen in the forms of  $NH_3$  and  $NH_4^{+1}$ . As a component of the nitrogen cycle, it is often present in water, but usually in only small amounts. More than 0.1 mg/l usually indicates organic pollution (Rudolph, 1931).

There is no evidence that ammonia nitrogen in water is physiologically significant to man or livestock. Fish, however, cannot tolerate large quantities.

Nitrite (NO2)

Nitrite is unstable in the presence of oxygen and is, therefore, either absent or present in only minute quantities in most natural waters under aerobic condition. The presence of nitrite in water is sometimes an indication of organic pollution.

Recommended tolerances of nitrite in domestic water supplies differ widely. A generally accepted limit is 2 mg/l, but as little as 0.1 mg/l has been proposed (California State Water Quality Control Board, 1963).

Nitrate (NO<sub>2</sub>)

Nitrate in water is considered a final oxidation product of nitrogenous material and may indicate contamination by sewage or other organic matter, such as agricultural runoff, or industrial waste. The quantities of nitrate present in surface waters are generally less than 5 mg/l (as  $NO_3$ ) and have no effect on the value of the water for ordinary uses.

It has been reported that as much as 2 mg/l of nitrate in boiler water tends to decrease intercrystalline cracking of boiler steel. Studies made by Faucett and Miller (1946), Waring (1949) and by the National Research Council (Maxcy, 1950) concluded that drinking water containing nitrates in excess of 44 mg/l (as NO<sub>3</sub>) should be regarded as unsafe for infant feeding. ISD-W (1971) sets 45 mg/l as the upper limit.

#### Phosphorus (P)

Phosphorus is an essential element in the growth of plants and animals. It occurs in water as organically bound phosphorus or as phosphate (PO<sub>4</sub>). Some sources that contribute nitrate, such as organic wastes are also important sources of phosphorus. The addition of phosphates in water treatment constitutes a possible source although the dosage is usually small. In some areas phosphate fertilizers may yield some phosphorus to water. Another important source is the use of phosphates in detergents. Domestic and industrial sewage effluents often contain considerable amounts of phosphorus. Concentrations of phosphorus found in water are not reported to be toxic to man, animal, or fish. However, the element can stimulate the growth of algae, which may cause taste and odor problems in public water treatment and esthetic problems in recreation areas.

#### Boron (B)

Boron in small quantities has been found essential for plant growth, but irrigation water containing more than 1 mg/l boron is detrimental to citrus and other boron-sensitive crops. Boron is reported in Survey analyses of surface waters in arid and semiarid regions of the Southwest and West where irrigation is practiced or contemplated, but few of the surface waters analyzed have harmful concentrations of boron.

#### Dissolved solids

The reported quantity of dissolved solids--the residue on evaporation--consists mainly of the dissolved mineral constituents in the water. It may also contain some

organic matter and water of crystallization. Waters with less than 500 mg/l of dissolved solids are usually satisfactory for domestic and some industrial uses. Water containing several thousand mg/l of dissolved solids are sometimes successfully used for irrigation where practices permit the removal of soluble salts through the application of large volumes of water on well-drained lands, but generally water containing more than about 2,000 mg/l is considered to be unsuitable for long-term irrigation under average conditions.

#### Arsenic (As)

Arsenic compounds are present naturally in some waters, but the occurrence of quantities detrimental to health is rare. Weed killers, insecticides and many industrial effluents contain arsenic and are potential sources of water pollution. The upper limits of arsenic concentration in drinking-water should not exceed 0.05 mg/l (50  $\mu$ g/l) and it would seem wiser to keep the level as low as possible (ISD-W, 1971). Concentrations of 2-4 mg of arsenic per litre are reported not to interfere with the self-purification of streams (Rudolfs and others, 1944) but concentrations in excess of 15 mg/l may be harmful to some fish.

#### Barium (Ba)

Barium may replace potassium in some of the igneous rock minerals, especially feldspar, and barium sulfate (barite) is a common barium mineral of secondary origin. Only traces of barium are present in surface water and sea water. Because natural water contains sulfate, barium will dissolve only in trace amounts. Barium sometimes occurs in brines from oil-well wastes.

Barium concentrations in excess of 1.0 mg/lis not suitable for drinking and culinary use because of the serious toxic effects of barium on heart, blood vessels, and nerves.

#### Cadmium (Cd)

This element is found in nature largely in the form of the sulfide, and as an impurity in zinc-lead ores. The carbonate and hydroxide are not very soluble in water and will precipitate at high pH values; the chloride, nitrate, and sulfate are soluble and remain in solution under most pH conditions.

The extensive use of the element and its salts in metallurgy, electroplating, ceramics, and photography makes it a frequent component of industrial wastes.

The results of animal studies suggest that very small amounts of cadmium can produce nephrotoxic and cardiovascular effects. The reproductive organs of animals are specifically affected after parenteral administration of very small amounts of cadmium salts. The level of cadmium concentration proposed for water use is 0.01 mg/l (10  $\mu \mathrm{g}/\mathrm{l})$  or the lowest concentration that can be conveniently measured (ISD-W, 1971).

#### Chromium (Cr)

Few if any waters contain chromium from natural sources. Natural waters can probably contain only traces of chromium as a cation unless the pH is very low. When chromium is present in water, it is usually the result of pollution by industrial wastes. Concentrations of more than 0.05 mg/l of chromium in the hexavalent form constitute grounds for rejection of a water for domestic use on the basis of the standards of the U.S. Public Health Service (1962).

#### Cobalt (Co)

Cobalt occurs in nature in the minerals smaltite, (Co,Ni)As<sub>2</sub>, and cobaltite, CoAsS. Alluvial deposits and soils derived from shales often contain cobalt in the form of phosphate or sulfate, but other soil types may be markedly deficient in cobalt in any form (Bear, 1955). Ruminant animals may be adversely affected by grazing on land deficient in cobalt.

For domestic water supplies, no maximum safe concentration has been established.

Copper (Cu)

Copper is a fairly common trace constituent of natural water. Small amounts may be introduced into water by solution of copper and brass water pipes and other copperbearing equipment in contact with the water, or from copper salts added to control algae in open reservoirs. Copper salts such as the sulfate and chloride are highly soluble in waters with a low pH but in water of normal alkalinity the salts hydrolyze and the copper may be precipitated. In the normal pH range of natural water containing carbon dioxide, the copper might be precipitated as carbonate. The oxidized portions of sulfide-copper ore bodies contain other copper compounds. The presence of copper in mine water is common.

Copper imparts a disagreeable metallic taste to water. As little as 1.5 mg/l can usually be detected, and 5 mg/l can render the water unpalatable. Copper is not considered to be a cumulative systemic poison like lead and mercury; most copper ingested is excreted by the body and very little is retained. The pathological effects of copper are controversial, but it is generally believed very unlikely that humans could unknowingly ingest toxic quantities from palatable drinking water. The U.S. Public Health Service (1962) recommends that copper should not exceed 1.0 mg/l (1,000  $\mu$ g/l) in drinking and culinary water. ISD-W, 1971 gives 0.05 mg/l (50  $\mu$ g/l) as the highest desirable level. Lead (Pb)

Lead seldom occurs in most natural waters, but industrial mine and smelter effluents may contain relatively large amounts of lead which contaminates the streams. Also, atmospheric contamination which is produced from several types of engine exhausts has considerably increased the availability of this element for solution in rainfall, resulting in contamination of lead in streams (Hem, 1970).

Lead in the form of sulfate is reported to be soluble in water to the extent of  $31\,\mathrm{mg/l}$  (Seidell, 1940) at  $25^{\circ}\mathrm{C}$ . In natural water this concentration would not be approached, however, since a pH of less than 4.5 would probably be required to prevent formation of lead hydroxide and carbonate. It is reported (Pleissner, 1907) that at  $18^{\circ}\mathrm{C}$  water free of carbon dioxide will dissolve the equivalent of 1.4 mg/l of lead and the solubility is increased nearly four fold by the presence of 2.8 mg/l of carbon dioxide in the solution. Presence of other ions may increase the solubility of lead. Reports on human tolerance of lead vary widely. U.S. Public Health Service (1962) states that lead shall not exceed 0.05 mg/l (50  $\mu$ g/l) in drinking and culinary water on carriers subject to Federal quarantine regulations. ISD-W, 1971 gives 0.10 mg/l (100  $\mu$ g/l) as the upper limit. Lithium (Li)

Lithium is present in some minerals but is not abundant in nature. From available information, most fresh waters rarely contain lithium of concentrations exceeding 10 mg/l, but larger quantities may be present in brines and thermal waters. Lithium is used in metallurgy, medicinal water, and some types of glass and storage batteries. Waste from such industries may contain lithium.

Mercury (Hg)

Mercury is the only common metal which is liquid at ordinary temperatures. It occurs free in nature but its chief source is cinnabar (HgS). Mercury compounds are virulent culminative poisons which are readily absorbed through the respiratory and gastrointestinal tracts or through unbroken skin (Weast and Selby, 1967).

The main source of high concentrations of dissolved mercury in water, in the form of highly toxic methyl mercury, Hg(CH<sub>2</sub>)<sub>2</sub>, comes from waste discharges from industrial users of mercury and from mercurial pesticides.

Fish from streams and lakes subject to mercury contamination have been found to contain amounts of mercury above the safe limits for food consumption. The U.S. Public Health Service has proposed that the upper limit of dissolved mercury in water for domestic use should not exceed 5 micrograms per litre (0.005 mg/l). ISD-W, 1971 recommends 0.001 mg/l (1  $\mu$ g/l) as the upper limit of concentration.

#### Nickel (Ni)

Elemental nickel seldom occurs in nature, but its compounds are found in many ores and minerals. Many nickel salts are quite soluble and may contribute to water pollution, especially when discharged from metal-plating industries.

No set limit of nickel concentration has been established for public water supply. Strontium (Sr)

Strontium is a typical alkaline-earth element and is similar chemically to calcium. Strontium may be present in natural water in amounts up to a few mg/l much more frequently than the available data indicate. In most surface water the amount of strontium is small in proportion to calcium. However, in sea water the ratio of strontium to calcium is 1:30.

#### Zinc (Zn)

Zinc is abundant in rocks and ores but is only a minor constituent in natural water because the free metal and its oxides are only sparingly soluble. In most alkaline surface waters it is present only in trace quantities, but more may be present in acid water. Chlorides and sulfates of zinc are highly soluble. Zinc is used in many commercial products, and industrial wastes may contain large amounts.

Zinc in water does not cause serious effects on health, but produces undesirable esthetic effects. ISD-W, 1971 gives 5 mg/l  $(5,000~\mu g/l)$  of zinc content as the highest desirable level for drinking water and 15 mg/l as the maximum permissible level.

#### PROPERTIES AND CHARACTERISTICS OF WATER

#### Dissolved solids

Theoretically, dissolved solids are anhydrous residues of the dissolved substances in water.

All solutes affect the chemical and physical properties of the water and result in an osmotic pressure. Water with several thousand mg/l of dissolved solids is generally not palatable, although those accustomed to highly mineralized water may complain that less concentrated water tastes flat. The U.S. Public Health Service (1962) recommends that the maximum concentration of dissolved solids not exceed 500 mg/l in drinking and culinary water on carriers subject to Federal quarantine regulations, but permits 1,000 mg/l if no better water is available. ISD-W (1971) recommends 500 mg/l as the highest desirable level and 1,500 mg/l as the maximum permissible level. Reported livestock tolerances range from 3,000 mg/l (Colorado Agricultural Experiment Station, 1943) to 15,000 mg/l (Heller, 1933).

Industrial tolerances for dissolved solids differ widely, but few industrial processes will permit more than 1,000 mg/l. The Geological Survey classifies the degree of salinity of these more mineralized bodies of water as follows (Swenson and Baldwin, 1965):

Dissolved solids (mg/l)	Degree of salinity
Less than 1,000	Nonsaline.
1,000 to 3,000	Slightly saline.
3,000 to 10,000	Moderately saline
10,000 to 35,000	Very saline.

#### Hardness

Hardness is the characteristic of water that receives the most attention in industrial and domestic use. It is commonly recognized by the increased quantity of soap required to produce lather. The use of hard water is also objectionable because it contributes to the formation of scale in boilers, water heaters, radiators, and pipes, with the resultant decrease in rate of heat transfer, possibility of boiler failure, and loss of flow

Hardness is caused almost entirely by compounds of calcium and magnesium. Other constituents--such as iron, manganese, aluminum, barium, strontium, and free acid--also cause hardness, although they usually are not present in quantities large enough to have any appreciable effect.

Generally, bicarbonate and carbonate determine the proportions of "carbonate" hardness of water. Carbonate hardness is the amount of hardness chemically equivalent to the amount of bicarbonate and carbonate in solution. Carbonate hardness is approximately equal to the amount of hardness that is removed from water by boiling.

Noncarbonate hardness is the difference between the hardness calculated from the total amount of calcium and magnesium in solution and the carbonate hardness. The scale formed at high temperatures by the evaporation of water containing noncarbonate hardness commonly is tough, heat resistant, and difficult to remove.

Although many people talk about soft water and hard water, there has been no firm line of demarcation. Water that seems hard to an easterner may seem soft to a westerner. In this report hardness of water is classified as follows:

Hardness range	
(calcium carbonate in mg/l)	Hardness description
0-60	Soft Moderately hard Hard Very hard

Durfor and Becker, 1964, p. 23-27.

Acidity (H<sup>+1</sup>)

The use of the terms acidity and alkalinity is widespread in the literature of water analysis and is a cause of confusion to those who are more accustomed to seeing a pH of 7.0 used as a neutral point. Acidity of a natural water represents the content of free carbon dioxide and other uncombined gases, organic acids and salts of strong acids and weak bases that hydrolyze to give hydrogen ions. Sulfates of iron and aluminum in mine and industrial wastes are common sources of acidity.

Sodium-adsorption-ratio (SAR)

The term "sodium-adsorption-ratio (SAR)" was introduced by the U.S. Salinity Laboratory Staff (1954). It is a ratio expressing the relative activity of sodium ions in exchange reaction with soil and is an index of the sodium or alkali hazard to the soil. Sodium-adsorption-ratio is expressed by the equation:

$$SAR = \frac{Na^{+}}{\frac{Ca^{++}+Mg^{++}}{2}}$$

where the concentrations of the ions are expressed in milliequivalents per litre.

Waters are divided into four classes with respect to sodium or alkali hazard: low, medium, high, and very high, depending upon the SAR and the specific conductance. At a conductance of 100 micromhos per centimetre the dividing points are at SAR values of 10, 18, and 26, but at 5,000 micromhos the corresponding dividing points are SAR values of approximately 2.5, 6.5, and 11. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Specific conductance (micromhos per centimetre at 25°C)

Specific conductance is a convenient, rapid determination used to estimate the amount of dissolved solids in water. It is a measure of the ability of water to transmit a small electrical current (see p. 7). The more dissolved solids in water that can transmit electricity the greater the specific conductance of the water. Commonly,

the amount of dissolved solids (in mg/l) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well and it may even vary in the same source with changes in the composition of the water (Durfor and Becker, 1964 p. 27-29).

Specific conductance of most waters in the eastern United States is less than 1,000 micromhos, but in the arid western parts of the country, a specific conductance of more than 1,000 micromhos is common.

Hydrogen-ion concentration (pH)

Hydrogen-ion concentration is expressed in terms of pH units (see p. 7). The values of pH often are used as a measure of the solvent power of water or as an indicator of the chemical behavior certain solutions may have toward rock minerals.

The degree of acidity or alkalinity of water, as indicated by the hydrogen-ion concentration, expressed as pH, is related to the corrosive properties of water and is useful in determining the proper treatment for coagulation that may be necessary at water-treatment plants. A pH of 7.0 indicates that the water is neither acid nor alkaline, pH readings progressively lower than 7.0 denote increasing acidity and those progressively higher than 7.0 denote increasing alkalinity. The pH of most natural surface waters ranges between 6 and 8. Some alkaline surface waters have pH values greater than 8.0 and waters containing free mineral acid or organic matter usually have pH values less than 4.5.

The investigator who utilizes pH data in his interpretations of water analyses should be careful to place pH values in their proper perspective.

#### Temperature

Temperature is an important factor in properly determining the quality of water. This is very evident for such a direct use as an industrial coolant. Temperature is also important, but perhaps not so evident, for its indirect influence upon aquatic biota, concentrations of dissolved gases, and distribution of chemical solutes in lakes and reservoirs as a consequence of thermal stratification and variation.

Surface water temperatures tend to change seasonally and daily with air temperatures, except for the outflow of large springs. Superimposed upon the annual temperature cycle is a daily fluctuation of temperature which is greater in warm seasons than in cold and greater in sunny periods than with a cloud cover. Natural warming is due mainly to absorption of a solar radiation by the water and secondarily to transfer of heat from the air. Condensation of water vapor at the water surface is reported to furnish measurable quantities of heat. Heat loss takes place largely through radiation, with further losses through evaporation and conduction to the air and to the streambed. Thus the temperature of a small stream generally reaches a maximum in mid- to late afternoon due to solar heating and reaches a minimum from early to mid-morning after nocturnal radiation.

#### Color

In water analysis the term "color" refers to the appearance of water that is free from suspended solids. Many turbid waters that appear yellow, red, or brown when viewed in the stream show very little color after the suspended matter has been removed. The yellow-to-brown color of some waters is usually caused by organic matter extracted from leaves, roots, and other organic substances in the ground. In some areas objectionable color in water results from industrial wastes and sewage. Clear deep water may appear blue as the result of a scattering of sunlight by the water molecules. Water for domestic use and some industrial uses should be free from any perceptible color. A color less than 15 units generally passes unnoticed (U.S. Public Health Service, 1962). Some swamp waters have natural color in excess of 300 units.

The extent to which a water is colored by material in solution is commonly reported as a part of a water analysis because a significant color in water may indicate the presence of organic material that may have some bearing on the dissolved solids content. Color in water is expressed in terms of units between 0 and 500 or more based on the above standard (see p. 7).

#### Turbidity

Turbidity is the optical property of a suspension with reference to the extent to which the penetration of light is inhibited by the presence of insoluble material. Turbidity is a function of both the concentration and particle size of the suspended material. It is reported in terms of mg/l of silica or Jackson turbidity units (JTU).

Turbid water is abrasive in pipes, pumps, and turbine blades. Although turbidity does not directly measure the safety of drinking water, it is related to the consumer's acceptance of the water. The highest desirable level of turbidity for drinking water is 5 JTU with a maximum permissible level of 25 JTU (ISD-W, 1971).

#### Density at 20°C

Density is the mass of any substance per unit volume at a designated standard temperature. Density should not be confused with specific gravity, which is a mass-to-mass relation.

The density value has some use in industries that utilize brines and whose basic unit of concentration of dissolved material is density. Density is used primarily by the chemist in the computation of milligrams per litre for highly mineralized waters. Dissolved oxygen (DO)

Oxygen dissolved in water is derived from the air and from the oxygen given off in the process of photosynthesis by aquatic plants.

Dissolved oxygen in water has no adverse physiological effect and actually increases the palatability of the water. No minimum concentration of dissolved oxygen required to support fish life has been listed because the oxygen requirements of fish vary with the species and age, with temperature, and with concentration of other substances in the water.

Dissolved oxygen is responsible for many of the corrosion problems in industry. Chemical oxygen demand (COD)

Chemical oxygen demand is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural-water color or with carbonaceous organic pollution from sewage or industrial wastes.

#### Biochemical oxygen demand (BOD)

Biochemical oxygen demand is a measure of the oxygen required to oxidize the organic material usable as a source of food by aerobic organisms.

### Biological and microbiological information

Biological and microbiological information is an important aspect in the evaluation of water quality. The kinds and amount of aquatic biota in a stream or lake can be useful "indicators" of environmental conditions and particularly of the degree of pollution of water with organic wastes (Doudoroff and Warren, 1957). Biological information includes qualitative and quantitative analyses of plankton, bottom organisms, and particulate inorganic and amorphous matter present. Microbiological information includes quantitative identification of certain bacteriological indicator organisms.

Chlorophyll (plant pigment).--The concentrations of photosynthetic pigments in natural waters vary with time and changing aquatic conditions. Concentrations of chlorophyll <u>a</u>, <u>b</u>, and <u>c</u> (spectrophotometric determination) are used to estimate the biomass and photosynthetic capacity of phytoplankton (blue-green algae). Ratios between the different forms of chlorophyll are thought to indicate the taxonomic composition or the physiological state of the algae community (Slack, 1970).

Plankton.--Plankton is the floating (or weakly swimming) animal or plant life in a body of water consisting, chiefly of minute plants (as diatomes and blue-green algae) and of minute animals (as protozoan, entomostracans and various larvae). Algae are known to cause tastes and odor in water supply.

Plankton population in water is obtained by count level (the number of organisms per millilitre),

Coliform bacteria.--Coliform organisms have long been used as indicators of sewage pollution, although the group includes bacteria from diverse natural sources and habitats. For example, members of the coliform group are indigenous to soil and vegetation as well as feces. Standards for drinking-water quality provide definite minimums as to number of samples examined and the maximum number of coliform organisms allowable per 100 millilitres (ml) of finished water (Slack, 1970). The coliform population of water is determined either by the most probable number (MPN), or by the incubation membrane filter method, a direct count of coliform colonies per plate.

Fecal coliform bacteria.--Fecal coliform is that portion of the coliform group that is present in the intestinal tract of warm-blooded animals and is capable of producing gas from lactos in suitable culture medium at 44.5°C. Organisms from other sources generally cannot produce gas in this manner. (American Public Health Assoc. and others, 1965). Thus, in general, the presence of fecal coliform organisms indicates recent pollution (Slack, 1970).

#### Organics

Phenols.--Phenolic material in water resources is invariably the result of pollution. Phenols are widely used as disinfectants and in the synthesis of many organic compounds. Waste products from oil refineries, coke areas, and chemical plants may contain high concentrations. Fortunately, phenols decompose in the presence of oxygen and microorganisms, and their persistence downstream from point of entry is relatively short lived. The rate of decomposition is dependent on the environment.

Very low concentrations impart such a disagreeable taste to water that it is highly improbable that harmful amounts could be consumed unknowingly. Reported thresholds of detection of taste and odor range from 0.001 to 0.01 mg/l.

Cyanide (CN).--Cyanides are not found free in nature, but may become contaminants of water supplies by means of effluents from gasworks, coke ovens, steel mills, electroplating processes, and chemical industries. In natural streams and organic soils, simple cyanides are decomposed by bacterial action, whereas the metal-cyanide complexes are often quite stable and more resistant to degradation. The U.S. Public Health Service (1962) set a recommended limit of 0.01 mg cyanide per litre and a mandatory limit of 0.2 mg/l for waters subject to interstate regulations. ISD-W (1971) sets the upper limit for drinking water as 0.05 mg/l.

Detergents (methylene blue active substance, MBAS).--Anionic surfactants in detergents resist chemical oxidation and biological breakdown. Soap is an example of this class and the synthetic members are sodium salts of organic sulfonates or sulfates (Rose, 1966). Their persistence in water over long periods of time contributes to pollution of both ground water and surface water. Some of the effects produced from detergent pollution are unpleasant taste, odor, and foaming (Wayman, and others, 1962). Although the physiological implications of MBAS to human beings is unknown, prolonged ingestion of this material by rats is believed to be nontoxic (Paynter, 1960). The U.S. Public Health Service (1962) recommends that MBAS should not exceed 0.5 mg/l in drinking and culinary waters. ISD-W (1971) sets 0.2 mg/l as the highest desirable level and 1.0 mg/l as the maximum permissible level.

Total organic carbon (TOC).--Total organic carbon is a measure of the organically related carbonaceous content of water. It includes all natural and manmade organic compounds which are combustible at a temperature of 950°C.

#### Sediment

Fluvial sediment generally is regarded as that material which is transported by, suspended in, or deposited by water. Suspended sediment is that part which remains in suspension in water owing to the upward components of turbulent currents or by colloidal suspension. Much fluvial sediment results from the natural process of erosion,

which in turn is part of the geologic cycle of rock transformation. This natural process may be accelerated by agricultural practices. Sediment also is contributed by a number of industrial and construction activities. In certain sections, waste materials from mining, logging, oil-field, and other industrial operations introduce large quantities of suspended material.

The quantity of sediment, transported or available for transportation, is affected by climatic conditions, form or nature of precipitation, character of the solid mantle, plant cover, topography, and land use. The mode and rate of sediment erosion, transport, and deposition is determined largely by the size distribution of the particles or more precisely by the fall velocities of the particles in water. Sediment particles in the sand size range (larger than 0.062 mm) do not appear to be affected by flocculation or dispersion resulting from the mineral constituents in solution. In contrast, the sedimentation diameter of clay and silt particles in suspension may vary considerably from point to point in a stream or reservoir, depending on the mineral matter in solution and in suspension and the degree of turbulence present. The size of sediment particles in transport at any point depends on the type of erodible and soluble material in the drainage area, the degree of flocculation present, time in transport, and characteristics of the transporting flow. The flow characteristics include velocity of water, turbulence, and the depth, width, and roughness of the channel. As a result of these variable characteristics, the size of particles transported, as well as the total sediment load, is in constant adjustment with the characteristics and physical features of the stream and drainage area.

#### STREAMFLOW

Most of the records of stream discharge, used in conjunction with the chemical analyses and in the computation of sediment loads in this volume, are published in the Geological Survey water-supply paper series, "Surface Water Supply of the United States, 1966-70." The discharge reported for a composite sample is usually the average of daily mean discharges for the composite period. The discharges reported in the tables of single analyses are either daily mean discharges or discharges obtained at the time samples were collected and computed from a stage-discharge relation or from a discharge measurement.

#### **PUBLICATIONS**

Reports giving records of chemical quality and temperatures of surface waters and suspended-sediment discharges of streams in the area covered by this volume for the water years 1941-70, are listed below:

Numbers of water-supply papers	containing records	for	Parts	9-10	1941.	-70

Year	WSP	Year	WSP	Year	WSP	Year	WSP
1941	942	1949	1163	1957	1523	1965	1965
1942	950	1950	1189	1958	1574	1966	1995
1943	970	1951	1200	1959	1645	1967	2015
1944	1022	1952	1253	1960	1745	1968	2098
1945	1030	1953	1293	1961	1885	1969	2148
1946	1050	1954	1353	1962	1945	1970	2158
1947	1102	1955	1403	1963	1951		
1948	1133	1956	1453	1964	1958		

Geological Survey reports containing chemical quality, temperature, and sediment data obtained before 1941 are as follows. Publications dealing largely with the quality of ground-water supplies and only incidentally covering the chemical composition of surface waters are not included. Publications that are out of print are preceded by an asterisk.

COOPERATION

21

#### PROFESSIONAL PAPER

\*135. Composition of river and lake waters of the United States, 1924.

#### BULLETINS

- \*479. The geochemical interpretation of water analyses, 1911.
- 770. The data of geochemistry, 1924.

#### WATER-SUPPLY PAPERS

- \*108. Quality of water in the Susquehanna River drainage basin, with an introductory chapter on physiographic features, 1904.
- \*161. Quality of water in the upper Ohio River basin and at Erie, Pa., 1906.
- \*193. The quality of surface waters in Minnesota, 1907.
- \*236. The quality of surface waters in the United States, Part 1, Analyses of waters east of the one hundredth meridian, 1909.
- \*237. The quality of the surface waters of California, 1910.
- \*239. The quality of the surface waters of Illinois, 1910.
- \*273. Quality of the water supplies of Kansas, with a preliminary report on stream pollution by mine waters in southeastern Kansas, 1911.
- \*274. Some stream waters of the western United States, with chapters on sediment carried by the Rio Grande and the industrial application of water analyses, 1911.
- \*339. Quality of the surface waters of Washington, 1914.
- \*363. Quality of the surface waters of Oregon, 1914.
- \*418. Mineral springs of Alaska, with a chapter on the chemical character of some surface waters of Alaska, 1917.
- \*596-B. Quality of water of Colorado River in 1925-26, 1928.
- \*596-D. Quality of water of Pecos River in Texas, 1928.
- \*596-E. Quality of the surface waters of New Jersey, 1928.
- \*636-A. Quality of water of the Colorado River in 1926-28, 1930.
- \*636-B. Suspended matter in the Colorado River in 1925-28, 1930.
- \*638-D. Quality of water of the Colorado River in 1928-30, 1932.
- \*839. Quality of water of the Rio Grande basin above Fort Quitman, Tex., 1938.
- \*889-E. Chemical character of surface water of Georgia, 1944.
- \*998. Suspended sediment in the Colorado River, 1925-41, 1947.
  - 1048. Discharge and sediment loads in the Boise River drainage basin, Idaho, 1939-40, 1948.
- 1110-C. Quality of water of Conchas Reservoir, New Mexico, 1939-49, 1952.

Many of the reports listed are available for consultation in the larger public and institutional libraries. Copies of Geological Survey publications still in print may be purchased at a nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, who will, upon request, furnish lists giving prices.

#### COOPERATION

Many municipal, State, and Federal agencies assisted in collecting records for quality-of-water investigations. Many of the investigations were supported by funds appropriated directly to the U.S. Geological Survey. Chemical-quality and sediment-discharge investigations in the Colorado River basin in Arizona, Colorado, New Mexico, and Utah have been a continuing project since 1925.

The State, local, and Federal agencies that cooperated in these quality-of-water investigations are as follows:

Arizona--Bureau of Reclamation, U.S. Department of the Interior; Environmental Protection Agency; Soil Conservation Service, U.S. Department of Agriculture; International Boundary and Water Commission, U.S. Department of State; Arizona Water Commission; Salt River Valley Water Users' Association; Metropolitan Water District of Southern California.

California--California Department of Water Resources; California Water Control Board; Metropolitan Water District of Southern California.

Idaho--Idaho Department of Water Administration, R. K. Higginson, director.

Nevada--Bureau of Reclamation, U.S. Department of the Interior; Soil Conservation Service, U.S. Department of Agriculture; Environmental Protection Agency.

New Mexico--New Mexico State Engineer, S. E. Reynolds; New Mexico Interstate Stream Commission, S. E. Reynolds, secretary; New Mexico Institute of Mining and Technology, S. A. Colgate, president; Bureau of Reclamation, U.S. Department of the Interior; Environmental Protection Agency; Corps of Engineers, U.S. Army; Soil Conservation Service, U.S. Department of Agriculture; U.S. Department of the Air Force.

Utah--Utah Department of Natural Resources, Gordon Harmston, executive director; Bureau of Reclamation, U.S. Department of the Interior; Environmental Protection Agency.

Wyoming--Wyoming Department of Agriculture, G. J. Hertzler, commissioner; Wyoming State Engineer, F. A. Bishop; Wyoming Game and Fish Commission, J. B. White, commissioner; Wyoming Department of Economic Planning and Development, M. W. Goodson, chief of water development; Bureau of Reclamation and Bureau of Land Management, U.S. Department of the Interior; Environmental Protection Agency.

#### DIVISION OF WORK

The quality-of-water work was performed by the Water Resources Division of the Geological Survey, J. S. Cragwall, Jr., chief hydrologist, and under the direction of the district chiefs listed in the preface.

Correspondence regarding the records in this report or any additional information should be directed to the district chief of the appropriate Geological Survey-Water Resources Division district office as indicated below.

State	District Office	Address
Arizona	Tucson 85701	Federal Building 301 W. Congress St.
California	Menlo Park 94025	855 Oak Grove Avenue
Colorado	Lakewood 80225	Building 53 Denver Federal Center
Idaho	Boise 83724	Room 365 550 West Fort Street Box 036, Federal Bldg.
Nevada	Carson City 89701	Room 229 Federal Bldg, 705 North Plaza Street
New Mexico	Albuquerque 87106	Geology Bldg., 2nd floor Univ. of New Mexico Campus P. O. Box 4369
Oregon	Portland 97208	830 N. E. Holladay Street P. O. Box 3202
Utah	Salt Lake City 84138	8002 Federal Bldg. 125 South State Street
Wyoming	Cheyenne 82001	4015 Warren Avenue P. O. Box 2087

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### WATER-QUALITY STATIONS, IN DOWNSTREAM ORDER

#### PART 9. COLORADO RIVER BASIN

## COLORADO RIVER MAIN STEM

## 09019000 COLORADO RIVER BELOW LAKE GRANBY, COLO.

LOCATION.--Lat 40°08'39", long 105°52'00", in SE\[ SE\] sec.11, T.2 N., R.76 W., Grand County, at gaging station 0.3 mile downstream from Granby Dam, 1 mile upstream from Walden Hollow, and 5 miles northeast of Granby.

DRAINAGE AREA.--312 sq mi.

PERIOD OF RECORD. -- Chemical analyses: July 1969 to August 1970.

CHEMICAL ANALYSES, JULY 1969 TO AUGUST 1970

DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	CAL+ CIUM (CA) (MG/L)	MAG- NE- Sium (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCD3) (MG/L)	SULFATE (SD4) (MG/L)	CHLO- RIDE (CL) (MG/L)
JULY 196	9								
09	81	8.0	7.3	1.9	2.7	•9	32	3.8	.9
AUG.									
20	31	9.0	8.0	1.7	2.7	1.0	32	3.6	1.3
20	31	9.0	7.6	1.7	2.7	1.0	32	3.6	1.3
SFPT.									
17	33	9.0	8.0	1.4	2.5	• 9	33	3.8	1.3
17	33	9.0	7.8	1.6	2.5	.9	32	3.8	1.3
OCT.									
21	15	8.0	6.7	1.6	2.4	• 7	32	1.4	1.2
NDV.						_			
21	18	5.0	6.4	2.4	2.4	• 8	32	2.0	1.7
DEC.	20					.7	35	3.5	1.6
30 JAN 1970		3.0	6.4	2.4	2.3	• (	35	3.5	1.0
23	20	3.5	7.6	1.1	2.4	.9	33	3.8	1.7
FE8.	20	3.9	1.0	1.1	2.4	• •	33	3.0	1.1
18	19	2.0	8.8	1.7	2.5	1.0	33	4.8	2.6
MAR.	1,	2.0	0.0	1.,	2.07	1.0	,,	4.0	2.00
17	18	4.0	8.0	1.9	2.5	1.1	32	6.5	1.7
APR.	10	4.0	0.0	1.,	2.0	***	32	0.0	
22	18	3.0	8.4	1.0	2.2	•9	30	3.2	1.4
MAY			•••			• • •			
21	59	4.0	8.3	1.9	2.3	1.0	33	6.5	1.4
JUNE									
17	81	8.0	7.4	.9	2.6	• 9	26	4.0	1.3
JULY									
21	89	7.0	6.4	2.9	2.5	1.0	35	3.0	1.6
AUG.				1.1	2.3	1.0		2.2	1.7
25	29	8.0	7.5				31		

	DIS-							
	SULVED	D12-	DIS-		NON-	SODIUM	SPECI-	
	SOLIDS	SDLVED	SOLVED		CAR-	AD-	FIC	
	(RESI-	SOLIDS	SDLIDS	HARD-	BONATE	SDRP-	CDND-	
	OUE AT	(TONS	(TONS	NESS	HARD-	TION	UCTANCE	PH
	180 C)	PER	PER	(CA,MG)	NE\$5	RATIO	(MICRO-	
DATE	(MG/L)	AC-FT1	DAYI	(MG/L)	(MG/L)		MHDS)	(UNITS)
JULY 196	9							
09	50	. 17	10.9	26	1	•2	58	6.8
AUG.								
20	49	.07	4.10	27	ı	•2	58	6.2
20	49	.07	4.10	26	0	•2	58	6.3
SEPT.						_		
17	50	.07	4.45	26	0	•2	58	6.3
17	50	.07	4.45	26	0	•2	58	6.7
DCT.								
21	40	•05	1.62	23	0	. 2	55	6.8
NOV.						_		
21	41	•06	1.99	26	0	•2	57	7.5
DEC.					_	-	56	7.7
30	42	•06	2.27	26	0	• 2	26	(* (
JAN 197						•2	56	7.6
23	30	•04	1.62	24	0	• 2	96	7.0
FEB.			2.26	29	2	•2	56	7.0
18	44	.06	2.26	29	2	• 2	,,,	1.0
MAR.	46	.06	2.24	28	2	•2	56	7.2
17 APR.	40	.06	2.24	20	-	• •	,,,	
22	44	.06	2.14	25	0	.2	56	6.4
MAY	44	.00	2.14		•	•		
21	41	•06	6.53	30	3	•2	59	7.2
JUNE	**				-			
17	44	.06	9-62	22	1	•2	55	7.5
JULY								
21	40	.05	9.61	28	0	•2	54	7.6
AUG.								
25	40	.05	3.13	23	0	.2	61	7.8

#### COLORADO RIVER MAIN STEM

#### 09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, COLO.

LOCATION. --Lat 40°04'27", long 106°06'24", Grand County, at bridge at Hot Sulphur Springs, 1 mile downstream from gaging station and 3.5 miles upstream from Beaver Creek.

DRAINAGE AREA, -- 825 sq mi (at gaging station).

PERIOD OF RECORD. -- Chemical analyses: April 1947 to September 1970. Water temperatures: April 1949 to September 1970.

#### EXTREMES. --1969-70:

Specific conductance: Maximum daily, 191 micromhos Apr. 20; minimum daily, 67 micromhos May 31.
Water temperatures: Maximum, 19.0°C Aug. 25; minimum, freezing point on many days during December to April.

Period of record:
Dissolved solids (1947-50, 1952-69): Maximum, 167 mg/l Jan. 23-28, 1967; minimum, 38 mg/l June 21-30, 1947.
Hardness (1947-50, 1952-69): Maximum, 98 mg/l Feb. 12-16, 1967; minimum, 20 mg/l June 21-30, 1947.
Specific conductance: Maximum daily, 263 micrombos Mar. 6, 1968; minimum daily, 48 micrombos June 27, 1947.
Water temperatures (1949-70): Maximum, 24.0°C Aug. 8, 1957, July 6, 11, 14, 21, 1966; minimum, freezing point on many days during winter periods.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SIO2) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PD- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCD3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
oct.											
21	107	2.0	12	19	3.8	6.7	1.4	89	4.2	2.0	.3
NOV. 21	77	2.0	14	19	3.4	34	2.6	141	11	11	1.0
DEC. 30	76	D.0	13	15	4.7	6.7	1.4	78	6.0	1.9	.3
JAN. 23	70	0.0	12	15	4.4	6.7	1.3	76	4.8	1.3	•2
FEB. 18	70	0.0	12	17	2.9	7.0	1.9	78	5.0	2.2	•2
MAR. 17	74	1.0	12	19	3.4	7.B	4.3	81	10	2.4	•2
APR. 22 May	127	3.0	11	20	2.9	6.5	2.9	89	5.5	3.1	•2
21 JUNE	2120	10.0	11	11	.7	5.0	1.7	38	7.5	3.8	• 3
18 JULY	58D	15.0	11	17	2.2	4.7	1.7	70	5.2	1.6	•2
21 AUG.	247	16.D	13	21	3.2	5.9	1.2	86	5.D	1.7	•3
25 SEPT.	88	13.0	15	16	4.6	6.6	1.6	84	2.8	1.1	.3
17	65	13.5	13	19	3.l	7.2	1.6	89	6.2	2.0	.1
DATE	VITRATE (ND3) (MG/L)	ORTHO PHDS- PHATE (PO4) (MG/L)	80RDN {B} (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SDLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER OAY)	HARD- NESS (CA,MG) (MG/L)	NDN- CAR- BDNATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRD- MHOS)	PH (UNITS)
DCT. 21	(403)	PHDS- PHATE (PD4)	(B)	SOLVED SOLIDS (RESI- DUE AT 180 C)	SOLVED SDLIDS (TONS PER	SOL VED SOL IDS (TONS PER	NESS (CA,MG)	CAR- BDNATE HARD- NESS	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO-	(UNITS)
DCT. 21 NOV. 21	(ND3) (MG/L)	PHDS- PHATE (PD4) (MG/L)	(B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SDLIDS (TONS PER AC-FT)	SOL VED SOL IDS (TONS PER OAY)	NESS (CA,MG) (MG/L)	CAR- BDNATE HARD- NESS (MG/L)	AD- SDRP- TION	FIC COND- UCTANCE (MICRO- MHOS)	
DCT. 21 NOV. 21 DEC. 3D	(MG/L)	PHDS- PHATE (PD4) (MG/L)	(B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C1 (MG/L)	SOLVED SDLIDS (TONS PER AC-FT)	SOL VED SOLIDS (TONS PER OAY)	NESS (CA,MG) (MG/L)	CAR- BDNATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
DCT. 21 NOV. 21 DEC. 3D JAN. 23	(ND3) (MG/L) .1	PHDS- PHATE (PD4) (MG/L)	(B) (UG/L) 0	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SDLIDS (TONS PER AC-FT)	SOL VED SOLIDS (TONS PER OAY) 28.0 35.8	NESS (CA,MG) (MG/L) 64	CAR- BDNATE HARD- NESS (MG/L)	SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 7.6 7.8
DCT. 21 NOV. 21 DEC. 3D JAN. 23 FEB. 18	(ND3) (MG/L) .1 .1	PHDS- PHATE (PD4) (MG/L) .07	(B) (UG/L) 0 0	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 97 172	SOLVED SOLIOS (TONS PER AC-FT) -13 -23	SOL VED SOLIDS (TONS PER OAY) 28.0 35.8	NESS (CA,MG) (MG/L) 64 63	CAR- BDNATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 150 279	7.6 7.8 6.8
DCT. 21 NOV. 21 DEC. 3D JAN. 23 FEB. 18	(NO3) (MG/L) .1 .1 .3	PHDS- PHATE (PD4) (MG/L) .07 .07	(B) (UG/L) 0 0 0	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 97 172 96	SOLVED SOLIOS (TONS PER AC-FT) -13 -23 -13	SOL VED SOL IDS (TONS PER OAY) 28.0 35.8 19.7 16.3	NESS (CA,MG) (MG/L) 64 63 58	CAR- BDNATE HARDNESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 150 279 141	7.6 7.8 6.8 7.3
DCT	(NO3) (MG/L) .1 .1 .3 .9	PHDS- PHATE (PD4) (MG/L) .07 .07 .03 .08	(B) (UG/L) 0 0 0	SOL VED SOL IDS (RESI- DUE AT 180 C) (MG/L) 97 172 96 86	SOLVED SDLIOS (TOMS PER AC-FT) -13 -23 -13 -12	SOL VED SOL IDS (TONS PER OAY) 28.0 35.8 19.7 16.3 18.5	NESS {CA,MG} (MG/L) 64 63 58 56	CAR-BDNATE HARD-NESS (MG/L)  O  D  O	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 150 279 141 132	7.6 7.8 6.8 7.3 7.1
DCT	(NO3) (MG/L) .1 .1 .3 .9 1.8	PHDS- PHATE (PD4) (MG/L) .07 .07 .03 .08 .03	(B) (UG/L) 0 0 0 0 D	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 97 172 96 86 98	SOLVED SDLIOS (TONS PER AC-FT) .13 .23 .13 .12 .13	SOL VED SOL IDS (TONS PER OAY) 28.0 35.8 19.7 16.3 18.5 21.2	NESS (CA, MG) (MG/L)  64  63  58  56  56	CAR-BDNATE HARD-NESS (MG/L)  O  D  O  O	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 150 279 141 132 139	7.6 7.8 6.8 7.3 7.1
DCT	(NO3) (MG/L) .1 .1 .3 .9 1.8 5.4	PHDS- PHATE (PD4) (MG/L) .07 .07 .03 .08 .D3 .18	(B) (UG/L) 0 0 0 0 0	SOL VED SOL IDS (RESI- DUE AT 180 C) (MG/L) 97 172 96 86 98 106	SOLVED SOLIOS (TONS PER AC-FT) -13 -23 -13 -12 -13 -14	SOL VED SOL IDS (TONS PER OAY)  28.0  35.8  19.7  16.3  18.5  21.2	NESS (CA, MG) (MG/L)  64  63  58  56  55  60  62	CAR-BDNATE HARD-NESS (MG/L)  D  O  O  O	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 150 279 141 132 139 157	7.6 7.8 6.8 7.3 7.1 8.0
DCT. 21 NOV. 21 DEC. 3D 23 FEB. 18 MAR. 17 APR. 22 MAY 21 JUNE 18	(NO3) (MG/L) .1 .1 .3 .9 1.8 5.4 .2	PHDS- PHATE (P24) (MG/L) .07 .03 .08 .03 .18 .07	(B) (UG/L) 0 0 0 0 0	SOL VED SOL LOS (RES) - 180 C) (MS/L) 97 172 96 86 98 106 107 68	SOL VED SOL IOS (TONS PER AC-FT)  13  23  13  12  13  14  15	SOL VED SOL IDS (TONS PER OAY)  28.0  35.8  19.7  16.3  18.5  21.2  36.7	NESS (CA_MG) (MG/L) 64 63 58 56 55 60 62	CAR-BONATE HARD-NESS (MG/L)  O  O  O  O  O  1	AD- SORP- TION RATIO	COND- COND- UCTANCE (MICRO- MHOS) 150 279 141 132 139 157 70	7.6 7.8 6.8 7.3 7.1 8.0 6.7 6.8
DCT. 21 NOV. 21 DEC. 3D JAN. 23 FEB. 18 MAR. 17 APR. 22 MAY 21 JULY 21	(NO3) (MG/L) .1 .1 .3 .9 1.8 5.4 .2	PHDS- PHATE (P34) (MG/L) .07 .07 .03 .08 .03 .18 .07	(B) (UG/L) 0 0 0 0 0	SOL VED SOL IDS (RES) - DUE AT 180 C1 (MG/L) 97 172 96 86 98 106 107 68 89	SOL VED SOL IOS (TONS PER AC-FT)	SOL VED SOL IDS (TONS PER OAY)  28.0  35.8  19.7  16.3  18.5  21.2  36.7  389	NESS (CA, MG) (MG/L)  64  63  58  56  55  60  62  32  52	CAR-BONATE HARD-NESS (MG/L)  O  O  O  O  O  O  O	AD- SORP- TION RATIO	ETC COND- UCTANCE (MICRO- MHCS) - 150 279 141 132 139 157 70	(UNITS)  7.6  7.8  6.8  7.3  7.1  8.0  6.7  6.8  7.7

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## 09034500 COLORADO RIVER AT HOT SULPHUR SPRINGS, COLO. -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT) DAY OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP 142 153 139 145 150 150 132 136 144 147 152 151 151 139 151 2 155 161 145 86 72 70 74 74 73 144 144 143 151 142 140 143 143 140 144 168 152 103 102 123 144 158 152 164 3 4 5 141 145 154 112 161 142 154 159 154 173 173 165 142 133 80 118 6 148 143 151 152 161 145 145 145 141 137 150 148 147 148 147 147 144 144 166 150 114 111 106 111 118 152 80 8 9 10 92 92 92 130 133 120 159 159 159 148 161 157 147 156 146 147 146 143 141 141 143 143 142 144 146 139 140 108 107 71 98 99 146 140 140 139 143 156 148 150 154 154 149 151 178 172 152 150 158 158 107 11 12 13 14 15 144 144 135 82 108 151 150 150 160 174 159 143 143 144 175 174 179 110 105 159 157 156 158 157 142 143 140 144 144 16 17 150 149 --143 144 151 141 140 139 144 149 149 148 147 145 85 144 149 152 150 139 144 145 144 106 106 154 147 146 151 168 140 142 142 143 18 19 20 172 80 171 191 82 79 80 79 81 81 74 90 21 22 77 72 146 131 146 138 140 144 148 190 149 178 157 153 151 149 147 147 139 138 141 146 143 141 143 125 117 116 153 154 164 159 143 142 143 146 150 138 162 23 24 25 69 70 145 145 146 120 69 90 138 116 152 152 149 149 150 144 143 150 148 150 148 74 75 71 80 117 128 26 145 119 69 73 138 82 145 158 157 151 151 119 125 121 125 141 140 142 158 27 28 29 30 31 145 150 110 115 137 121 146 146 146 133 136 136 130 69 71 67 --80 119 150 160 134 146 144 158 128 144 AVG 148 143 144 146 152 92 86 142 TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT) DAY OC T NDV DEC MAR APR JUN JUL AUG SEP FEB 15.0 16.0 15.0 15.0 15.0 16.5 14.5 4.5 4.5 5.0 0.5 0.5 0.5 0.5 0.5 0.0 0.0 0.0 3.0 3.0 3.0 2.0 2.0 16.0 17.0 16.0 16.0 18.0 18.0 18.0 2.0 8.0 5.0 2 3 0.0 10.0 0.0 5.5 5.5 4.5 1.0 1.0 2.0 45 18.0 0.5 10.0 15.0 13.0 15.0 15.0 16.0 17.0 18.0 5.0 5.5 4.5 5.5 4.5 5.0 3.5 5.0 4.5 5.0 0.5 0.5 1.0 0.5 0.5 2.0 0.0 2.0 2.0 2.0 3.0 10.0 15.0 6789 0.0 0.5 0.0 0.0 0.0 10.0 15.0 0.5 0.0 2.0 1.0 10.0 16.0 10 18.0 11 12 13 5.5 5.0 8.5 7.0 8.0 5.0 4.5 4.5 3.5 0.0 0.5 0.5 0.5 0.0 0.0 0.5 0.5 2.0 2.0 1.0 17.0 16.0 16.0 16.0 15.0 12.0 13.0 14.0 13.0 0.5 0.0 2.0 10.0 17.0 18.0 17.0 18.0 11.0 12.0 11.0 11.0 0.5 4.0 4.0 4.0 0.0 14 15 0.0 0.0 8.5 7.0 8.0 9.0 7.0 0.5 0.5 0.5 0.5 0.5 0.0 0.5 0.0 0.5 2.0 3.0 1.0 5.0 7.0 7.0 11.0 15.0 15.0 15.0 14.0 17.0 18.0 17.0 17.0 15.0 18.0 17.0 18.0 0.5 14.0 12.0 16 17 18 19 20 4.5 3.5 0.5 0.5 0.0 16.0 --0.0 1.0 8.0 17.0 7.0 7.0 5.5 5.5 5.5 0.0 0.5 0.5 0.5 0.0 0.0 2.0 2.0 0.0 8.0 9.0 12.0 12.0 12.0 16.0 16.0 17.0 17.0 16.0 15.0 15.0 19.0 21 22 23 24 25 0.5 11.0 3.5 5.5 5.0 5.0 11.0 13.0 13.0

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AVG

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2.0

1.5

9.0

9.0

9.0

8.0

5.4

14.0 15.0 15.0 14.0 13.0

11.9

16.0

16.0 18.0 17.0 16.0 16.0

16.3

16.0 16.0 17.0 16.0 16.0

16.7

13.0 13.0 13.0 13.0

13.0

14.0

### 09069000 EAGLE RIVER AT GYPSUM, COLO.

LOCATION. -- Lat 39°39'00", long 106°57'06", Eagle County, at bridge at Gypsum, about 400 ft upstream from Gypsum Creek, about 520 ft upstream from bridge on U.S. Highways 6 and 24, and about 550 ft upstream from gaging station.

DRAINAGE AREA. -- 844 sq mi.

PERIOD OF RECORD. --Chemical analyses: April 1947 to September 1970. Water temperatures: April 1949 to September 1970.

#### EXTREMES. -- 1969-70;

Specific conductance: Maximum daily, 1,210 micromhos Dec. 30; minimum daily, 171 micromhos May 28. Water temperatures: Maximum, 16.0°C July 20, Aug. 3, 20; minimum, freezing point on many days during November to February.

#### Period of record:

eriod of record: Dissolved solids (1947-69): Maximum, 1,370 mg/l Aug. I1, 12, 1952; minimum, 100 mg/l June 13-25, 1968. Hardness (1947-50, 1957-69): Maximum, 600 mg/l Dec. 7-9, 1964; minimum, 70 mg/l June 23, 1957. Specific conductance: Maximum daily, 1,850 micromhos Aug. 6, 1949; minimum daily, 155 micromhos May 23, 1958. Water temperatures: Maximum, 24.0°C Aug. 24, 1949; minimum, freezing point on many days during winter periods.

REMARKS. -- Records of discharge are given for Eagle River below Gypsum, Colo. (station 09070000).

DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SID2) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDF (F) (MG/L)
0CT. 27 NOV.	340	8.0	7.7	99	23	41	2.4	167	200	58	.2
20	201	0.5	9.0	125	28	68	2.9	194	255	110	• 2
DEC. 22 JAN.	208	2.0	8.4	106	24	58	2.7	167	243	84	.0
26 FEB.	208	1.0	8.4	118	28	54	3.4	147	245	108	•2
25 MAR.	170	2.0	8.3	111	27	46	4.2	166	248	63	.3
24 APR.	170	1.5	7.5	112	27	58	2.9	177	279	77	•2
22 MAY	233	8.5	16	85	23	49	2.5	152	200	64	• 2
21 JUNE	3510	7.0	5.8	26	6.3	3.8	1.4	76	26	3.1	. 4
22 JULY	2880	11.0	4.9	29	6.0	4.9	1.0	74	38	5.9	•2
28 AUG.	464	14.0	7.6	106	17	23	2.4	151	213	32	-4
26 SEPT.	280	16.0	9.1	105	16	27	2.3	180	180	37	.5
23	464	8.0	36	95	24	23	2.4	165	192	29	•2
				DIS- SDLVED	015-	DIS-		NON-	SODIUM	SPECI-	
DATE	NITRATE (NO3) (MG/L)	DRTHO PHOS- PHATE (PG4) (MG/L)	BORON (8) (UG/L)	SDLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRD- MHOS)	PH (UNITS)
DATE OCT.	(ND3)	PHOS- PHATE (PO4)	(8)	SDLIDS (RESI- DUE AT 180 C)	SOLVED SOLIDS (TONS PER	SOLVED SOLIDS (TONS PER DAY)	NFSS {CA,MG}	CAR- BONATE HARD- NESS	SORP- TIDN	COND- UCTANCE (MICRD- MHOS)	
	(ND3)	PHOS- PHATE (PO4)	(8)	SDLIDS (RESI- DUE AT 180 C)	SOLVED SOLIDS (TONS PER	SOLVED SOLIDS (TDNS PER	NFSS {CA,MG}	CAR- BONATE HARD- NESS	SORP- TIDN	COND- UCTANCE (M1CRD- MHGS)	(UNITS) 7.6
OCT. 27 NOV. 20 DEC.	(NO3) (MG/L) •8	PHOS- PHATE (PD4) (MG/L)	(8) (UG/L)	SDLIDS (RESI- DUE AT 180 C) (MG/L) 547	SOLVED SOLIDS (TONS PER AC-FT) .74	SOLVED SOLIDS (TDNS PER DAY) 502 401	NESS (CA,MG) (MG/L) 344 428	CAR- BONATE HARD- NESS (MG/L) 207	SORP- TIDN RATIO 1.0	COND- UCTANCE (MICRD- MHOS) 813	7.6 7.7
DCT. 27 NDV. 20 DEC. 22 JAN.	(NO3) (MG/L) -8 -1	PHOS- PHATE (PD4) (MG/L)	(8) (UG/L) 0	SDLIDS (RESI- DUE AT 180 C) (MG/L) 547 738	SOLVED SOLIDS (TONS PER AC-FT) .74 1.00	SOLVED SOLIDS (TONS PER DAY) 502 401 354	NESS (CA,MG) (MG/L) 344 428 364	CAR- BONATE HARD- NESS (MG/L) 207 269 227	SORP- TION RATIO 1.0	COVD- UCTANCE (MICRD- MHOS) 813 1100	7.6 7.7 7.9
DCT. 27 NDV. 20 DEC. 22 JAN. 26 FEB.	(NO3) (MG/L) -8 -1 1-1	PHOS- PHATE (PO4) (MG/L) .00 .00	(8) (UG/L)	SDLIDS (RESI- DUE AT 180 C) (MG/L) 547 738 631 756	SOLVED SOLIDS (TONS PER AC-FT) .74 1.00 .86	SOL VED SOL IDS (TONS PER DAY) 502 401 354 425	NESS (CA,MG) (MG/L) 344 428 364 410	CAR- BONATE HARD- NESS (MG/L) 207 269 227 289	1.0 .1 1.3	COND- UCTANCE (MICRD- MHGS) 813 1100 943	7.6 7.7 7.9 7.6
OCT. 27 NOV. 2D DEC. 22 JAN. 26 FEB. 25	(NO3) (MG/L) .8 .1 I.1 18	PHOS- PHATE (PO4) (MG/L) .00 .00 .00	(8) (UG/L) 0 0 0	SOLIDS (RESI- DUE AT 180 C) (MG/L) 547 738 631 756 636	SOLVED SOLIDS (TONS PER AC-FT) .74 1.00 .86	SOL VED SOL IDS (TDNS PER DAY) 502 401 354 425 292	NESS (Ca, MG) (MG/L) 344 428 364 410 388	CAR- BONATE HARD- NESS (MG/L) 207 269 227 289 252	1.0 .1 1.3	COND- UCTANCE (MICRD- MHGS) 813 1100 943 1110	7.6 7.7 7.9 7.6 7.7
DCT. 27 NDV. 2D DEC. 22 JAN. 26 FEB. 25 MAR. 24	(NO3) (MG/L) -8 -1 1-1	PHOS- PHATE (P04) (MG/L) .00 .00 .00 .08 .08	(8) (UG/L) 0 0 0	SOLIDS (RESI- DUE AT 180 C) (MG/L) 547 738 631 756 636	SOLVED SOLIDS (TONS PER AC-FT) .74 1.00 .86 1.03 .86	SOLVED SOLIDS (TDNS PER DAY) 502 401 354 425 292 307	NESS (CA,MG) (MG/L) 344 428 364 410 388 398	CAR- BONATO- HARD- NESS (MG/L) 207 269 227 289 252	1.0 .1 1.3 1.2 1.0	COND- UCTANCE (MICRO- MHOS) 813 1100 943 1110 916 984	7.6 7.7 7.9 7.6 7.7 8.0
DCT. 27 NDV. 2D 22 JAN. 26 FEB. 25 MAR. 24 APR.	(NO3) (MG/L) -8 -1 I-1 18 3-3 2-6	PHOS- PHATE (PD4) (MG/L) -00 -00 -00 -08 -08 -00 -13	(8) (UG/L)	SDLIDS (RESI- DUE AT 180 C) (MG/L) 547 738 631 756 636 669 518	SDL 10S SDL 10S SDL 10S SDL 10S (TOMS PER AC-FT) .74 1.00 .86 1.03 .86 .91 .70	SOL VED SOL IDS (TDNS PER DAY)  502  401  354  425  292  307  326	NESS (CA,MG) (MG/L) 344 428 364 410 388 398 299	CAR- BONATE HARD- NESS (MG/L) 207 269 227 289 252 253 174	1.0 .1 1.3 1.2 1.0	COND- COND- COND- COND- MHOS) 813 1100 943 1110 916 984 773	7.6 7.7 7.9 7.6 7.7 8.0 7.9
DCT. 27 NDV. 2D 22 JAN. 26 FEB. 25 MAR. 24 APR. 22 MAY	(NO3) (MG/L) .8 .1 I.1 18 3.3 2.6 1.0	PMOS- PMATE (P04) (MG/L) -00 -00 -08 -08 -00 -13	(8) (UG/L)	SDLIOS (RESI- DUE AT 180 C) (MG/L) 547 738 631 756 636 669 518	SRLYED SOLIDS (TOMS PER AC-FT)  .74 1.00 .86 1.03 .86 .91 .70	SOL VED SOL IDS (ITONS PER DAY)  502 401 354 425 292 307 326 1170	NESS (CA.MG) (MG/L) 344 428 364 410 388 398 299	CAR- BONATE HARD- NESS (MG/L) 207 269 227 289 252 253 174 28	\$08P- TIDN RATIO	COND- UCTANCE (MICRO- MHOS) 813 1100 943 1110 916 984 773	7.6 7.7 7.9 7.6 7.7 8.0 7.9 7.4
DCT- 27 NDV- 20 DEC- 24 26 FEB- 25 MAR- 24 APR- 22 MAY 21 JUNE 22 JULY	(NO3) (MG/L) .8 .1 1.1 18 3.3 2.6 1.0 9.0	PHOS- PHATE (PO4) (PO4) (MG/L) .00 .00 .00 .08 .00 .13 .00	(8) (UG/L) 0 0 0 0 0	SDLIOS (RESIDUE AT 180 C) 180 C) 180 C) 738 631 756 636 669 518 123 137	SRLYED SOLIDS (TOMS PER AC-FT)  .74 1.00 .86 1.03 .86 .91 .70 .17	SOL VED SOL IDS SOL IDS SOL IDS SOL IDS (TDNS PER DAY)  502 401 354 425 292 307 326 1170 1070	NFSS (CA+MG) (MG/L) 344 428 364 410 388 398 299 90 96	CAR- BONATE HARD- NESS (MG/L) 207 269 227 289 252 253 174 28	\$00P- TIDN RATIO	COVÖ- UCTANCE (MICRO- MHCS)  813 1100 943 1110 916 984 773 190 215	7.6 7.7 7.9 7.6 7.7 8.0 7.9 7.4
OCT	(NO3) (MG/L) .8 .1 1.1 18 3.3 2.6 1.0 9.0 .3	PHOS- PHATE (P04) (P04) (MG/L) .00 .00 .08 .08 .00 .13 .00 .01	(8) (UG/L) 0 0 0 0 0 0 0	SDLIOS (RESIDUE AT 180 CI) 180 CI) 180 CI) 738 631 756 636 669 518 123 137 518	SOLIOS SOLIOS (TONS PER AC-FT)  -74 1.00 -86 1.03 -86 -91 -70 -17	SOL VED SOL IOS SOL IOS (TONS PER DAY)  502  401  354  425  292  307  326  1170  1070  649	NFSS (CA+MG) (MG/L) 344 428 364 410 388 398 299 90 96 332	CAR- BDNATE HARD- NESS (MG/L) 207 269 227 289 252 253 174 28 35 203	\$00P- TIDN RATIO	COVÖ- UCTANCE (MICRO- MHGS)  813 1100 943 1110 916 984 773 190 215	7.6 7.7 7.9 7.6 7.7 8.0 7.9 7.4 7.8
OCT	(NO3) (MG/L) .8 .1 1.1 18 3.3 2.6 1.0 9.0	PHOS- PHATE (PO4) (PO4) (MG/L) .00 .00 .00 .08 .00 .13 .00	(8) (UG/L) 0 0 0 0 0	SDLIOS (RESIDUE AT 180 C) 180 C) 180 C) 738 631 756 636 669 518 123 137	SRLYED SOLIDS (TOMS PER AC-FT)  .74 1.00 .86 1.03 .86 .91 .70 .17	SOL VED SOL IDS SOL IDS SOL IDS SOL IDS (TDNS PER DAY)  502 401 354 425 292 307 326 1170 1070	NFSS (CA+MG) (MG/L) 344 428 364 410 388 398 299 90 96	CAR- BONATE HARD- NESS (MG/L) 207 269 227 289 252 253 174 28	\$00P- TIDN RATIO	COVÖ- UCTANCE (MICRO- MHCS)  813 1100 943 1110 916 984 773 190 215	7.6 7.7 7.9 7.6 7.7 8.0 7.9 7.4

### EAGLE RIVER BASIN

## 09069000 EAGLE RIVER AT GYPSUM, COLO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

				( ON	CE-DAILY	MEASUREME	NT)					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	837	803	912	945	958	915	984		215	199	631	743
2	852	787	914	983	919	866	946	573	230	258	609	694
3	838	839	937	1020	922	895	952	529	219	270	662	673
2 3 4	867	883	911	1000	883	934	934	485	196	276	654	734
5	806	794	859	1000	946	967	943	412	196	268	610	763
6	857	794	871	977	946	920	938	351	189	303	597	759
7	821	798	983	936	919	961	877	329	196	316	617	486
8	775	801	1050	970	925	918	819	328	270	312	605	609
9	810	825	1000	986	1030	915	802	319	188	324	542	646
10	823	857	1030	901	1020	931	781	337	239	296	610	693
11	812	820	990	933	990	942	740	318	197	299	654	725
12	830	857	903	912	939	953	722	290	261	330	544	744
13	832	647	964	921	937	931	810	262	269	363	682	765
14	816	831	914	954	931	934	781	250	267	334	711	390
15	771	853	1020	970	946	897	817	261	261	380	724	476
		0,5	1010	,,,	, 10	0,,	011	201	201	500	127	4.0
16	784	867	1020	945	974	934	812	268	254	389	719	530
17	842	819	1000	945	942	926	821	248	242	40B	735	602
18	785	871	1000	930	987	950	719	197	225	425	782	620
19	679	1040	1000	915	983	976	719	240	203	440	773	643
20	771	901	961	921	1050	1070	741	200	196	447	758	661
21	822	833	940	915	1080	953	815	199	195	476	672	689
22	788	1050		895	1000	926	771	182	197	497	600	697
23	794	856	937	866	908	950	819	186	199	507	525	645
24	785	907	928	921	891	961	773	183	203	479	647	659
25	534	939	911	901	899	878	783	179	193	515	686	640
26	820	950	919	918	897	928	751	192	210	438	72L	638
27	767	1010	911	954	967	979	666	175	230	553	750	644
28	812	1090	943	927	939	947	492	171	201	545	765	619
29	774	973	1100	896		961	475	184	206	576	741	611
30	774	1040	1210	1160		926	514	192	245	595	788	622
31	786		1090	1150		934		192		615	796	
AVG	795	877	970	953	954	938	783	274	217	431	674	647

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

					( ONCL D)	ALL: HEAD	OKCHENTY					
DAY	OCT	NOV	OEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	5.5	1.0	0.0	0.0	1.0	4.5	6.5	4.5	11.0	14.0	12.0
2	13.0	4.5	0.0	0.0	0.0	5.5	5.0	6.5	5.0	10.0	14.0	11.5
3	11.0	3.0	0.0	0.0	0.0	2.0	5.5	6.5	6.5	11.0	16.0	14.C
4	11.5	4.0	0.0	0.0	1.0	5.0	4.5	7.0	7.0	12.0	15.0	11.5
5	11.0	5.5	0.0	0.0	2.0	3.5	6.0	5.0	8.0	12.0	15.5	9.5
6	7.0	5.5	0.0	0.0	1.5	6.5	8.5	5.5	8.5	13.0	15.0	11.0
7	7.0	4.5	0.0	0.0	2.0	6.0	10.0	6.0	9.0	14.0	15.0	10.0
8	7.0	4.5	0.0	0.0	2.0	5.5	10.5	4.0	8.5	11.5	14.5	10.0
9	9.5	4.0	0.0	0.0	3.0	5.0	7.0	3.5	9.0	14.0	14.5	12.0
10	8.5	5.5	0.0	0.0	1.5	5.5	10.5	4.5	8.5	13.0	13.5	10.0
11	6.0	5.5	0.0	0.0	3.0	5.0	9.0	6.0	7.0	13.0	13.5	13.0
12	6.5	5.5	1.0	0.0	3.5	6.0	10.0	7.0	10.5	11.5	13.0	11.5
13	6.0	5.5	1.0	0.0	3.0	1.5	7.0	5.0	8.5	12.0	11.5	11.5
14	6.0	4.5	0.5	0.0	3.5	3.0	5.5	4.5	9.5	11.5	13.5	13.5
15	5.5	4.5	0.0	0.0	4.0	5.0	8.0	3.0	8.5	13.0	13.0	12.0
16	6.5	4.5	0.0	0.0	1.0	3.0	9.0	5.5	8.5	14.5	14.0	9.0
17	6.5	3.0	0.0	0.5	2.0	2.0	8.5	6.0	14.0	13.0	12.0	13.5
18	6.0	0.0	0.5	0.0	1.0	4.0	6.0	5.0	13.0	12.0	13.0	14.0
19	6.0	0.0	1.0	0.0	1.5	3.0	5.0	5.5	8.5	15.0	15.5	10.0
20	8.0	0.0	1.0	0.0	1.5	3.5	7.0	5.5	9.5	16.0	16.0	10.5
21	6.5	0.5	0.5	0.5	4.0	1.5	8.0	6.0	10.5	12.0	15.5	10.0
22	5.5	0.0		1.0	1.0	1.5	8 • 0	6.5	11.5	14.5	15.0	8.5
23	8.5	0.0	1.5	0.0	4.0	4.0	7.0	6.5	10.0	13.5	15.5	8.5
24	6.0	0.0	0.5	0.0	4.5	8.0	8.0	8.0	11.0	13.0	13.0	9.0
25	6.5	0.5	1.0	1.0	1.5	4.0	7.0	5.5	10.5	14.0	13.0	6.0
26	6.0	0.0	0.0	1.5	1.0	4.0	8.0	6.0	9.0	14.5	13.0	6.0
27	6.5	0.0	0.0	1.5	3.0	4.5	7.0	6.5	9.5	13.5	12.0	7.0
28	6.0	0.0	0.0	0.0	1.5	5.0	7.0	7.0	9.5	12.0	14.0	6.5
29	6.5	0.0	0.0	1.0		5.5	4.5	6.5	11.0	13.0	11.5	10.0
30	4.5	0.0	0.0	0.0		4.5	6.0	5.5	9.5	13.0	12.0	7.0
31	4.5		0.0	0.0		4.0		8.5		13.5	13.0	
AVG	7.3	2.6	0.3	0.2	2.0	4.1	7.2	5.8	9.1	12.8	13.8	10.2

#### 09071100 COLORADO RIVER NEAR GLENWOOD SPRINGS, COLO. (Irrigation network station)

LOCATION. -- Lat 39°34'12", long 107°13'34", Garfield County, at Shoshone powerplant, 6 miles upstream from Glenwood Springs and 6.5 miles upstream from Roaring Fork River.

DRAINAGE AREA. -- 4,560 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: October 1941 to September 1970. Water temperatures: May 1949 to September 1970.

#### EXTREMES. -

REMES.--1969-70: Specific conductance: Maximum daily, 819 micromhos Dec. 31; minimum daily, 196 micromhos May 25. Water temperatures: Maximum, 20.0°C Aug. 6-8; minimum, freezing point on many days during November to February.

Period of record:
Dissolved solids (1941-69): Maximum, 2,030 mg/l Aug. 10, 1947; minimum, 105 mg/l June 1-10, 1942.
Hardness (1941-69): Maximum, 1,480 mg/l Aug. 10, 1947; minimum, 72 mg/l June 1-20, 1942.
Specific conductance: Maximum daily, 2,260 micromhos Aug. 10, 1947; minimum daily, 153 micromhos May 24, 1948.
Water temperatures (1949-70): Maximum, 21.5°C July 31, 1954, Aug. 19, 1955; minimum, freezing point on many days during winter periods.

REMARKS.--Discharges obtained by subtracting the daily mean flow in Roaring Fork River at Glenwood Springs (station 09085000) from the daily mean flow in Colorado River below Glenwood Springs (station 09085100).

DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SIO2) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PD- TAS- SIUM {K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE {CL) (MG/L)	FLU0- RIDE (F) (MG/L)
OCT. 28	1680	6.5	8.4	53	17	44	2.3	137	88	60	.4
NOV.	1250	0.0	8.8	61	19	64	2.6	152	. 98	95	.4
DEC. 23	1280	2.D	8.7	48		57	2.4	120	71	79	•2
JAN.	1280				11				77	81	
27 FEB.	_	1.0	9.6	50	11	57	2.6	124			.3
25 Mar.	1290	4.0	8.8	50	11	51	2.5	119	76	75	.4
APR.	1140	5.0	6.5	49	11	59	.2	128	94	79	.4
22 May	1430	4.0	14	46	12	59	3.3	131	84	45	.3
2l JUNE	13500	10.0	9.5	30	5.6	8.0	1.9	95	24	7.1	.3
JULY	7570	13.0	7.0	34	5.5	13	2.0	104	38	15	•3
28 AUG.	2140	16.5	9.1	51	9.2	36	2.1	121	74	47	•5
26 SEPT.	1630	17.5	12	51	13	48	2.2	126	85	66	•6
23	1750	11.5	11	58	12	46	2.5	137	90	70	.3
		ORTHO		DIS- SOLVED SOLIDS (RESI-	DIS- SOLVED SOLIDS	DIS- SOLVED	HARD-	NON- CAR- BONATE	SODIUM AD- SORP-	SPECI- FIC COND-	
DATE	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	OUE AT 180 C) (MG/L)	(TONS PER AC-FT)	SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	HARD- NESS (MG/L)	TION RATIO	UCTANCE (MICRO- MHOS)	PH (UNITS)
DCT.	(403) (MG/L)	PHATE (PO4) (MG/L)	(B) (UG/L)	OUE AT 180 C) (MG/L)	(TONS PER AC-FT)	(TONS PER DAY)	NESS (CA,MG) (MG/L)	HARD- NESS (MG/L)	RATIO	(MICRO- MHOS)	(STIPU)
OCT. 28 NOV.	(403) (MG/L)	PHATE (PO4) (MG/L)	(B) (UG/L)	OUE AT 180 C) (MG/L)	(TONS PER AC-FT)	(TONS PER DAY)	NESS (CA,MG) (MG/L)	HARD- NESS (MG/L)	RATIO	(MICRO- MHOS)	(UNITS)
DCT. 28	(403) (MG/L)	PHATE (PO4) (MG/L)	(B) (UG/L)	OUE AT 180 C) (MG/L)	(TONS PER AC-FT)	(TONS PER DAY)	NESS (CA,MG) (MG/L)	HARD- NESS (MG/L) 88	1.4 1.8	(MICRO- MHOS) 576 718	7.4 7.5
OCT. 28 NOV. 21	(403) (MG/L)	PHATE (PO4) (MG/L)	(B) (UG/L)	OUE AT 180 C) (MG/L)	(TONS PER AC-FT)	(TONS PER DAY)	NESS (CA,MG) (MG/L)	HARD- NESS (MG/L)	1.4 1.8 1.9	(MICRO- MHOS) 576 718 598	7.4 7.5 7.6
DCT. 28 NDV. 21 DEC. 23 JAN.	(403) (MG/L) .2 2.5	PHATE (PO4) (MG/L)	(B) (UG/L) 0	DUE AT 180 C) (MG/L) 357 432	(TONS PER AC-FT) -49	(TONS PER DAY) 1620 1460	(CA,MG) (MG/L) 200 232	HARD- NESS (MG/L) 88	1.4 1.8	(MICRO- MHOS) 576 718	7.4 7.5
OCT. 28 NDV. 21 DEC. 23 JAN. 27 FEB. 25	(NO3) (MG/L) .2 2.5	PHATE (PO4) (MG/L) .00 .01	(B) (UG/L) 0 0	DUE AT 180 C) (MG/L) 357 432 364	(TONS PER AC-FT) .49 .59	(TONS PER DAY) 1620 1460	NESS (CA,MG) (MG/L) 200 232 164	HARD- NESS (MG/L) 88 107	1.4 1.8 1.9	(MICRO- MHOS) 576 718 598	7.4 7.5 7.6
OCT. 28 NOV. 21 DEC. 23 JAN. 27 FEB. 25 MAR.	(NO3) (MG/L) .2 2.5 2.2	PHATE (PO4) (MG/L)  .00  .01  .02  .03	0 0 0 0	OUE AT 180 C) (MG/L) 357 432 364 371	(TONS PER AC-FT) -49 -59 -50	(TONS PER DAY) 1620 1460 1260	NESS (CA,MG) (MG/L) 200 232 164 170	HARD- NESS (MG/L) 88 107 66 68	1.4 1.8 1.9	(MICRO-MHOS)  576  718  598  618	7.4 7.5 7.6 7.4
OCT. 28 NOV. 21 OEC. 23 JAN. 27 FEB. 25 MAR. 24 APR. 22	(103) (MG/L) .2 2.5 2.2 .8	PHATE (PO4) (MG/L)	0 0 0 0	OUE AT 180 C) (MG/L) 357 432 364 371 357	(TONS PER AC-FT)  .49 .59 .50 .50	1620 1460 1260 1280	NESS (CA,MG) (MG/L) 200 232 164 170 168	HARD- NESS (MG/L) 88 107 66 68 70	1.4 1.8 1.9 1.9	MICRO-MHOS) 576 718 598 618	7.4 7.5 7.6 7.4 7.7
OCT. 28 NOV. 21 DEC. 23 JAN. 27 FEB. 25 MAR. 24 APR. 22 MAY 21	(NO3) (MG/L) .2 2.5 2.2 .8 .6	PHATE (P04) (MG/L)  .00  .01  .02  .03  .03	(B) (UG/L) 0 0 0	OUE AT 180 C) (MG/L) 357 432 364 371 357 589	(TONS PER AC-FT)  -49 -59 -50 -50 -49 -80	(TONS PER DAY)  1620 1460 1260 1280 1240 12810	NESS (CA,MG) (MG/L) 200 232 164 170 168 172	HARD- NESS (MG/L) 88 107 66 68 70	1.4 1.8 1.9 1.9	MICRO-MHOS)  576  718  598  618  599	7.4 7.5 7.6 7.4 7.7 7.9
OCT. 28 VOV. 21 DEC. 23 JAN. 27 FEB. 25 MAR. 24 APR. 22 MAY 21 JUNE	(NO3) (MG/L) .2 2.5 2.2 .8 .6 .2	PHATE (P04) (MG/L) .00 .01 .02 .03 .03 .01 .04	(B) (UG/L) 0 0 0 0 0	OUE AT 180 C) (MG/L) 357 432 364 371 357 589 370	.49 .59 .50 .50	(TONS PER DAY)  1620 1460 1260 1280 1240 1810 1430	NESS (CA,MG) (MG/L) 200 232 164 170 168 172	HARD- NESS (MG/L) 88 107 66 68 70 65	1.4 1.8 1.9 1.9 1.7 1.8	MICRO-MHOS)  576  718  598  618  599  612  588	7.4 7.5 7.6 7.4 7.7 7.9 7.6
DCT. 28 NDV. 21 DEC. 23 JAN. 27 FEB. 25 MAR. 24 APR. 22 JULY 28	(NO3) (MG/L) .2 2.5 2.2 .8 .6 .2 1.5	PHATE (P04) (MG/L)	(B) (UG/L) 0 0 0 0 0	OUE AT 180 C) (MG/L) 357 432 364 371 357 589 370	(TONS PER AC-FT) -49 -59 -50 -50 -49 -80 -50	1620 1460 1260 1260 1280 1240 1810 1430 5140	NESS (CA,MG) (MG/L)  200 232 164 170 168 172 164 99	HARD- NESS (MG/L) 88 107 66 68 70 65 57	1.4 1.8 1.9 1.7 1.8 2.0	6 MICRO-MHOS)  576  718  598  618  599  612  588  218	7.4 7.5 7.6 7.4 7.7 7.9 7.6 7.4
OCT. 28 NOV. 21 DEC. 23 JAN. 27 FEB. 25 MAR. 24 APR. 22 MAY 21 JUNE 22 JUNE	(NO3) (MG/L) .2 2.5 2.2 .8 .6 .2 1.5	PMATE (P04) (MG/L)	(B) (UG/L)  0  0  0  0  0  0  0  0  0  0  0  0  0	OUE AT 180 C) (MG/L) 357 432 364 371 357 589 370 141 162	(TONS PER AC-FT)  .49 .59 .50 .50 .49 .80 .50 .19	1620 1460 1260 1260 1280 1240 1810 1430 5140 3310	NESS (CC4,MG/L) 200 232 164 170 168 172 164 99	HARD- NESS (MG/L) 88 107 66 68 70 65 57 21	1.4 1.8 1.9 1.9 1.7 1.8 2.0	\$10 MHCRO-MHOS1	(UNITS)  7.4  7.5  7.6  7.4  7.7  7.9  7.6  7.4  7.9

## 09071100 COLORADO RIVER NEAR GLENWOOD SPRINGS, COLO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR DCTDBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT) FEB MAR OCT NOV DEC JAN JUL AUG

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	679	575	632	740	706	610	617	426	220	273	518	580
2	682	636	643	671	700	607	621	412	240	288	540	591
3	677	645	645	715	642	603	620	483	233	302	540	580
4	700	647	640	716	639	593	611	393	233	313	545	594
5	659	643	645	737	662	600	625	355	225	323	527	608
5	659	635	690	703	650	598	619	343	555	327	509	587
7	658	634	643	775	649	617	602	299	231	357	580	517
8	673	637	710	778	647	627	558	311	230	381	548	547
9	672	661	692	759	678	639	566	308	231	393	553	574
10	667	635	690	739	689	607	530	307	249	400	536	591
11	626	649	659	631	650	595	489	293	268	417	541	609
12	656	622	638	611	622	605	512	293	275	447	542	628
13	652	626	596	611	586	630	516	275	286	450	542	638
14	658	625	617	626	605	621	538	253	282	475	542	505
15	637	618	617	634	600		527	247	279	484	546	514
16	635	644	642	629	598	598	555	251	277	483	553	573
17	667	611	635	622	608	601	551	236	271	489	542	611
18	715	611	635	631	620	580	529	239	259	501	553	626
19	652	677	638	623	644	618	493	225	255	505	553	634
20	658	691	600	620	662	624	523	219	245	517	553	645
21	685	662	589		650	644	553	213	240	532	556	651
22	681		581	608	630	624	573	210	241	546	536	606
23	664	630	604	607	594	609	591	198	245	544		600
24		646	584	607	600	607	608	199	245	529	527	374
25	656	670	617	6C4	598	620		196	237	544	539	571
26	671	686	617	636	599	582	566	198	237	544	580	571
27	672	585	638	629	599	605	459	198	247		589	571
28	662	652	641	628		623	382	198	256	503	584	577
29	644			707		621	357	203	252	499	593	565
30	643	615	700	733		621	392	208	267	506	583	568
31	646		819	706		602		212		518	609	
AVG	663	638	643	667	634	611	540	271	249	446	551	580

									201			
31	646		819	706		602		212		518	609	
AVG	663	638	643	667	634	611	540	271	249	446	551	580
				•			,,-			,,-		
		TE	MPERATURE	(°C) DE 1	NATER, WAI	TER VEAR (	OCTORER 1	az nt pag	PTEMBER 1	970		
				, ., .		LILY MEASE		,0, ,0 00	, c. pen e			
DAY	DCT	NOV	OEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.5	3.5	0.5	0.0	0.0	3.5	3.5	6.5	9.5	14.0	19.5	17.0
2	10.5	3.5	0.5	0.0	0.5	3.5	4.0	6.0	9.5	14.5	19.0	17.0
3	8.5	3.0	0.5	0.0	0.5	3.5	5.0	10.0	10.5	15.0	19.0	16.0
4	9.0	3.0	0.5	0.0	0.5	3.5	6.5	10.0	11.5	15.0	19.5	14.5
5	7.0	3.5	0.5	0.0	0.5	3.5	6.0	10.5	11.0	15.5	19.5	14.0
6	8.5	3.5	0.0	0.0	0.5	3.5	6.5	11.0	11.0	14.5	20.0	14.0
7	8.5	4.0	0.5	0.0	0.0	3.5	8.0	9.0	13.5	15.0	20.0	13.0
8	9.0	3.5	0.0	0.0	0.5	5.5	8.5	9.5	11.0	16.0	20.0	14.5
9	9.5	3.5	0.5	0.0	1.0	4.5	B • O	10.0	10.0	17.0	18.5	15.5
10	9.5	4.0	0.5	0.0	1.5	4.0	6.0	7.0	9.5	17.0	19.0	15.0
11	6.0	4.5	0.5	0.0	1.5	4.0	6.5	10.5	9.5	17.0	19.0	14.5
12	5.0	4.5	0.5	0.0	1.0	3.5	5.0	10.5	10.0	18.0	19.5	14.0
13	5.5	4.0	0.5	0.0	1.0	3.5	4.0	10.5	10.5	17.0	19.5	14.5
14	6.0	4.0	0.0	0.0	0.0	4.5	6.0	10.5	11.5	17.0	18.5	13.5
15	5.5	3.0	0.5	0.0	0.5		5.0	8.0	12.0	18.0	15.5	13.0
16	4.5	4.5	0.5	0.0	1.0	5.0	5.0	7.0	12.0	18.0	15.5	13.5
17	6.0	3.0	3.0	0.5	1.0	3.5	6.0	9.0	12.0	18.5	16.5	13.0
18	6.0	0.5	1.0	0.0	1.0	3.0	6.5	9.0	12.0	18.5	17.0	13.5
19	6.0	0.5	0.5	0.0	0.5	1.5	4.5	9.0	13.0	17.0	17.0	14.5
50	6.0	0.5	0.0	0.0	0.0	5 + 5	4.0	9.0	14.0	17.0	18.0	15.0
21	5.5	0.5	0.5		0.5	2.0	4.5	9.0	14.5	18.0	16.5	13.0
5.5	4.0		0.0	0.5	1.5	4.0	4.5	9.5	14.0	18.5	16.5	13.5
23	6.0	1.0	0.0	0.5	1.0	4.5	5.0	9.0	13.0	18.5		11.5
24		0.5	0.5	0.5	1.5	5.0	6.0	10.0	13.5	18.5	18.0	11.5
25	6.5	0.5	0.0	0.0	2.0	6.0		9.0	14.5	19.0	18.0	10.5
26	6.0	0.5	0.0	0.5	2.0	3.5	9.5	9.5	14.5	18.5	18.0	10.0
27	7.0	0.5	0.0	0.5	2.0	3.0	9.0	10.0	15.0		17.0	10.5
28	6.D	0.5	0.0	0.5		3.5	9.0	10.0	15.5	19.5	17.0	10.5
29	4.0			0.5		4.5	8.5	9.5	15.5	18.5	17.0	11.0
30	4.0	0.0	0.0	0.5		4.5	6.0	10.0	14.5	19.0	17.0	12.0
31	3.5		0.0	0.0		4.0		10.0		19.5	18.0	

6.1

9.2

17.2

12.2

18.1

13.4

AVG

6.6

2.4

0.4

0.1

0.8

3.7

### ROARING FORK RIVER BASIN

### 09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, COLO.

LOCATION. -- Lat 39°32'37", long 107°19'44", in SWijSEi sec.9, T.6 S., R.89 W., Garfield County, at gaging station at Glenwood Springs, 2,100 ft upstream from mouth.

DRAINAGE AREA, -- 1,451 sq mi.

PERIOD OF RECORD. --Chemical analyses: November 1958 to August 1961, May 1962 to September 1967, August 1969 to August 1970 Water temperatures: May 1962 to September 1967.

Period of record:
Dissolved solids (1962-67): Maximum, 509 mg/l Sept. 1-30, 1966; minimum, 124 mg/l July 1-13, 1965.
Hardness (1962-67): Maximum, 320 mg/l Oct. 1-13, 1963; minimum, 93 mg/l July 1-13, 1985.
Specific conductance (1968-69): Maximum daily, 870 micromhos Oct. 1, 1966; minimum daily, 189 micromhos May 26, 1964.
Water temperatures: Maximum, 22.0°C July 30, 1966; minimum, freezing point on many days during winter periods.

CHEMICAL ANALYSES, AUGUST 1969 TO AUGUST 1970

DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SD4) (MG/L)	CHLO- RIDE (CL) (MG/L)
AUG 1969									
26	656	18.0	88	17	31	2.1	200	134	40
SEPT. 25 OCT.	752	16.0	83	18	30	1.8	169	136	43
28	815	6.0	81	13	24	1.3	158	130	31
NOV. 21	593	1.0	77	18	31	1.6	169	132	39
DEC. 23 JAN 1970	521	2.0	75	20	23	1.8	164	131	34
27 FEB.	406	3.0	87	15	28	1.9	181	152	34
24 APR.	382	6.0	76	15	29	1.7	135	152	32
22 MAY	716	5.0	84	11	16	1.6	143	151	17
21	4840	11.0	38	4.9	4.8	1.2	8	46	4.2
23 JULY	5300	14.5	32	4.6	5.3	.9	85	35	6.7
28 AUG.	1390	14.5	73	3.9	18	1.5	133	92	24
26	752	14.5	80	17	32	2.0	150	127	43

DATF	DIS- SOLVED SULIDS (RESI- OUE AT 180 C) (MG/L)	OTS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATF HARD- NESS (MG/L)	SOOLUM AD- SORP- TION RATIO	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH (UNITS)
AUG 1969	,							
26	436	.59	772	287	123	• 8	675	7.2
SEPT.								
25	435	.59	883	284	145	. 8	654	7.2
OCT.				254	124	.7	587	7.7
28 NOV.	383	•52	843	254	124	• 1	201	'•'
21	415	.56	664	266	127	.8	634	7.5
DEC.	427	• • • •	•••	200				
23	422	.57	594	272	138	<b>.</b> 6	621	7.6
JAN 1970						_		7.0
27	427	•58	468	280	132	.7	653	7.9
FEB. 24	391	.53	403	250	139	. 8	602	8.0
APR.	371	• ,,,	403	2 20	1,77	••		
22	379	• 52	733	254	136	.4	556	8.1
MAY								
21	159	.22	2080	116	45	•2	252	7.7
JUNE						• 2	220	7.9
23 JULY	142	-19	2030	98	29	• 2	220	,
28	319	.43	1200	198	80	•6	467	8.7
AUG.	-1,	•.,	1200	•				
26	431	.59	875	270	147	• 8	648	8.2

#### 09095500 COLORADO RIVER NEAR CAMEO, COLO.

LOCATION.--Lat 39°11'20", long 108°16'56", Mesa County, at Grand Valley project diversion dam, 0.4 mile upstream from Plateau Creek, 3.7 miles upstream from Cameo, and 5.9 miles downstream from gaging station.

DRAINAGE AREA. -- 8.050 sq mi. approximately (at gaging station).

PERIOD OF RECORD. --Chemical analyses: October 1933 to September 1970. Water temperatures: April 1949 to September 1970.

Specific conductance: Maximum daily, 1,380 micromhos Dec. 24; minimum daily, 272 micromhos May 25.
Water temperatures: Maximum, 21.5°C Aug. 4-6; minimum, freezing point on many days during December to January.

Period of record:
Dissolved solids (1933-43, 1950-66): Maximum, 1,080 mg/l Sept. 22, 1962; minimum, 143 mg/l June 11-20, 1935.
Hardness (1933-35, 1957-66): Maximum, 474 mg/l Sept. 22, 1962; minimum, 98 mg/l June 21-30, 1935.
Specific conductance (1941-70): Maximum daily, 1,860 micromhos June 16, 1964; minimum daily, 244 micromhos July 2, 1947, July 3, 1957.
Water temperatures (1949-70): Maximum, 24.5°C Aug. 16, 1962; minimum, freezing point on many days during winter periods.

DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SIO2) (MG/L)	CAL~ CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUD- RIDE (F) (MG/L)
OCT. 22	2840	7.0	3.9	75	19	86	3.2	172	153	110	.4
NOV. 26	2010	3.0	8.0	71	20	120	3.6	178	148	156	.4
DEC. 23	1600	3.0	6.9	66	18	119	3.8	162	132	158	.4
JAN. 14	1750	0.5	9.0	68	19	128	4.6	172	134	162	.4
FE8.	1650	3.0	7.0	72							
MAY	3900				19	145	5.3	168	158	205	.4
JUNE		7.0	9.7	54	11	63	3.2	136	96	78	.3
JULY	14100	15.5	6.6	32	6.6	21	1.4	97	38	25	.3
29 AUG.	3660	19.0	8.3	61	14	73	3.1	143	112	96	.4
31 SEPT.	2100	23.0	10	65	17	112	5.7	167	160	140	•5
25	2560	10.5	12	71	17	103	3.7	167	147	134	.4
DATE	NITRATE (ND3) (MG/L)	OR THD PHDS- PHATE (PO4) (MG/L)	BORON (8) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NDN- CAR- BDNATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC CDND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.											7.5
22 NOV.	2.7	•00	0	568	•77	4360	268	127	2.3	913	7.5
26 DEC.	3.6	.01	0	649	.88	3520	260	115	3.2	1050	8.1
23 JAN.	6.2	•03	0	618	.84	2670	239	106	3.3	1020	7.9
14 FEB.	7.5	.02	0	641	.87	3030	250	109	3.5	1060	7.8
11 MAY	8.6	•D1	0	734	1.00	3270	260	122	3.9	1230	7.4
O1 JUNE	3.2	.02	0	389	.53	4100	178	66	2.1	625	7.7
26 JULY	1.3	.03	4	188	.26	7160	107	28	•9	310	7.9
29 AUG.	3.2	•00	5	463	.93	4580	212	90	2.2	744	8.4
31 SEPT.		.00	8	623	.85	3530	232	95	3.2	1020	7.5
25	3.2	.01	3	599	.81	4140	246	109	2.9	959	8.1

### 09095500 COLORADO RIVER NEAR CAMEO, COLO. -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	1050	1060	1360	1160	1060	1020	571	298	336	833	1030
2	1060	1050	1070	1360	1180	1040	1020	623	317	435	832	1030
2 3	980	1050	1090	1360	1130	1050	1020	619	326	455	832	946
4	980	1050	1150	1350	1180	1050	889	619	327	428	896	943
5	977	1050	1170	1360	L180	1090	1020	621	330	446	957	971
6	977	1050	1160	1360	1180	1100	1020	535	345	452	957	1100
7	980	1020	1150	1360	1170	1100	1020	472	323	442	837	803
8	980	1040	1160	1360	1180	1100	1020	430	330	453	840	795
9	967	1940	1150	1360	1180	1100	1020	453	327	532	837	797
10	468	1030	1170	1090	1180	987	1020	460	375	535	832	850
11	952	1040	1170	1080	1180	987	887	449	369	536	846	847
12	955	1040	1170	1070	1190	987	884	447		543	855	906
13	152	1040	1160	1080	1050	983	887	404	372	534	945	904
14	974	1020	1350	1080	1050	983	886	360	386	590	931	904
15	949		1350	1070	1050	983	886	320	366	590	940	792
16	94)	1030	1350	1070	1050	983	914	320	376	631	972	781
17	049	1030	1360	1080	1050	987	914	317	371	631	972	787
18	949	1020	1360	1060	1050	980	915	317	370	651	972	809
19	912	1020	1370	1090	1050	987	915	319	344	668	966	787
20	915	1020	1360	1060	1050	987	915	291	337	677	981	907
21	917	1030	1370	1070	1040	1030	549	287	311	679	966	903
22	910	1030	1360	1070	1050	1040	546	298	310	807	972	982
23	987	1030	1360	1080	1050	1040	545	291	315	816	997	977
24	994	1030	1380	1100	1050	1040	541	280	308		1000	952
25	979	1070	1370	1100	1050	970	547	272	305		1010	944
		2	25.0	,	1030	,,,	,,,	2	305		1020	
26	458	1070	1360	1100	1050	964	541	278	309	746	1010	916
27	953	1070	1370	1100	1340	967	530	284	323	746	1010	908
28	950	1070	1360	1100	1070	967	543	284	324	744	1010	940
29	947	1070	1370	1100		958	543	284	325	742	1010	943
30	1000	1030	1370	1100		964	550	284	329	753	1010	957
31	1010			1100		964		284		753	983	
AVG	967	1040	1270	1160	1100	1010	816	389	336	598	935	903

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	404	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ı	14.0	6.5	0.5	0.5	1.0	7.0	7.0	8.5	9.5	15.0	20.0	19.0
2	14.0	6.5	0.5	0.0	1.0	7.0	7.0	10.0	10.0	15.5	20.0	18.5
3	13.5	6.5	0.5	0.0	1.0	6.0	7.0	11.0	11.5	16.5	21.0	18.0
4	13.5	6.5	0.5	0.0	1.0	6.0	7.0	11.5	11.5	17.0	21.5	18.0
5	13.5	6.5	0.5	0.0	1.5	6.0	7.0	12.0	11.5	17.0	21.5	18.5
6	11.0	6.5	0.5	0.0	1.5	6.0	7.0	12.0	11.5	17.0	21.5	13.5
7	9.0	6.0	0.5	0.0	1.5		7.0	11.5	11.5	17.0		11.0
8	8+5	5.5	0.0	0.0	1.5	6.5	7.0	9.5	11.5	17.0	21.0	15.5
9	10.5	5.5	0.0	0.0	1.5	7.0	7.0	8.5	11.5	17.0	20.5	15.5
10	10.5	5.5	0.0	0.0	1.5	7.0	8.0	9.0	10.0	17.0	20.5	16.0
11	9.5	5.5	0.0	0.0	1.5	7.0	8.5	8.5	10.0	17.0	20.0	16.0
12	7.0	5.5	0.0	0.0	1.5	7.0	8.5	10.5		17.0	20.0	16.0
13	6.5	5.5	0.0	0.0	2.0	7.0	8.5	10.5	13.5	17.0	20.0	16.0
14	6.5	5.5	0.5	0.0	2.0	7.0	8.5	10.0	14.0	18.5	19.5	16.0
15	7.0		0.5	0.0	2.0	7.0	8.5	11.0	13.5	19.0	19.5	15.0
16	7.0	5.5	0.5	0.0	2.0	7.0	8.5	11.0	13.5	19.5	19.5	14.5
17	6.5	5.5	0.5	0.0	2.0	7.0	8.5	11.0	13.5	19.5	19.5	13.5
18	6.5	4.5	0.5	0.0	2.0	7.0	8.5	11.0	13.5	19.0	20.0	13.5
19	8.0	4.5	0.5	0.5	2.0	7.0	8.5	11.0	14.5	19.5	19.0	13.5
20	8.0	3.5	0.5	0.5	2.0	4.5	8.5	10.5	14.0	19.5	19.0	11.5
21	8.0	1.0	0.5	0.5	2.0	4.0	8.0	10.5	14.0	19.5	19.5	11.5
22	8.0	1.5	0.5	0.5	1.5	5.5	8.0	11.0	14.0	19.5	19.5	12.0
23	8.0	1.5	0.5	0.0	1.5	6.0	8.0	11.0	14.0	19.5	19.5	12.0
24	8.0	1.0	0.5	1.0	1.5	6.5	8.0	11.5	14.5		19.5	11.0
25	8.0	0.5	0.0	1.0	1.5	6.5	8.0	11.5	14.5		19.5	11.0
26	8 - 5	0.5	0.0	1.0	1.5	6.5	8.0	11.5	15.0	19.5	20.0	10.0
27	6.5	0.5	0.0	1.0	5.0	6.5	8.5	11.5	15.5	19.5	20.0	11.0
28	6.5	0.5	0.0	1.0	5.5	6.5	8.5	11.5		19.5	20.0	12.0
29	6.0	0.5	0.0	0.0		6.5	8.5	11.5	16.0	19.5	19.5	13.0
30	6.5	0.5	0.0	0.0		6.0	8.5	11.0	15.0	19.5	19.5	13.0
31	7.0			0.0		6.0		9.5		19.5	19.0	
AVG	8.7	3.9	0.3	0.2	1.8	6.4	7.9	10.6	12.9	18.1	19.9	14.1

#### 09152500 GUNNISON RIVER NEAR GRAND JUNCTION, COLO. (Irrigation network station)

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LOCATION.--Lat 38°59'00", long 108°27'00", near center of sec.14, T.2 S., R.1 E., Ute meridian, Mesa County, at gaging station at bridge on State Highway 141, 0.4 mile downstream from Whitewater Creek, 0.5 mile south of Whitewater, and 8 miles southeast of Grand Junction.

DRAINAGE AREA. -- 7,928 sq mi.

PERIOD OF RECORD, -- Chemical analyses: October 1931 to September 1970. Water temperatures: April 1949 to September 1970.

#### EXTREMES. -- 1969-70:

Nater temperatures: Maximum daily, 1,910 micromhos Oct, 12; minimum daily, 340 micromhos June 29. Nater temperatures: Maximum, 22.0°C Aug. 3; minimum, freezing point on many days during December to January.

Period of record:
Dissolved solids (1931-69): Maximum, 2,820 mg/l Sept. 11-20, 1934; minimum, 122 mg/l Mar. 1, 1969.
Hardness (1931-35, 1943-69): Maximum, 1,370 mg/l Sept. 1-20, 1934; minimum, 105 mg/l May 1-6, 1969.
Specific conductance (1941-70): Maximum daily, 2,730 micromhos Sept. 10, 1956; minimum daily, 280 micromhos May 23, 1948.
Water temperatures (1949-70): Maximum, 30.0°C Aug. 13, 1958; minimum, freezing point on many days during winter periods.

DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SIO2) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PD- TAS- SIUM (K) (MG/L)	BICAR~ BONATE (HCD3) (MG/L)	SULFATE (SD4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- R1DE (F) (MG/L)
OCT.											
22 NOV.	2040	9.D	14	106	51	62	3.8	192	432	15	•6
25	2380	5.5	12	89	36	63	3.2	173	357	10	• 2
DEC - 30	2030	1.0	13	77	33	58	3.0	169	302	9.5	• 2
30 FEB.	2040	1.0	13	70	30	52	3.0	167	248	10	.3
09 MAR.	2110	6.0	11	66	30	50	5.3	160	242	9.0	.5
06 APR.	2400	9.5	12	65	28	52	2.7	154	234	8.9	.4
24 MAY	1990	12.0	16	78	28	58	3.0	171	271	12	.4
18 JUNE	8680	13.0	11	46	11	20	2.2	109	101	3.4	. 3
29 JULY	11300	15.0	14	38	9.6	15	2.4	103	80	3.9	• 3
29 AUG.	1700	19.0	14	150	43	79	4.3	184	515	13	.7
25 SEPT.	1700	20.5	16	133	42	73	3,7	197	450	11	.8
25	3100	11.5	10	106	39	62	3.7	183	387	7.1	• 6
DATE	NITRATE (NO3) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TDNS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
oct.	(NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	(B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (TDNS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
0CT. 22 NDV.	(NG3) (MG/L)	PHDS- PHATE (PO4) (MG/L)	(B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (TDNS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 7.6
OCT. 22 NDV. 25 DEC.	(NG3) (MG/L) 4.4 3.0	PHDS- PHATE (PO4) (MG/L)	(B) (UG/L) 0	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (TDNS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY) 463	NESS (CA,MG) (MG/L) 472 370	CAR- BONATE HARD- NESS (MG/L) 315	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1110	(UNITS) 7.6 8.0
OCT. 22 NDV. 25	(NG3) (MG/L)	PHDS- PHATE (PO4) (MG/L)	(B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (TDNS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1110 923 830	7.6 8.0 8.0
OCT. 22 NOV. 25 DEC. 30 JAN.	(NG3) (MG/L) 4.4 3.0	PHDS- PHATE (PO4) (MG/L)	(B) (UG/L) 0	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (TDNS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY) 463	NESS (CA,MG) (MG/L) 472 370	CAR- BONATE HARD- NESS (MG/L) 315	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1110	(UNITS) 7.6 8.0
OCT. 22 NDV. 25 DEC. 30 JAN. 30 FEB.	(NO3) (MG/L) 4.4 3.0 2.9	PHDS- PHATE (PO4) (MG/L)	(B) (UG/L) 0 0	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 84 681	SOLVED SOLIDS (TONS PER AC-FT) .11 .93	SOLVED SOLIDS (TONS PER DAY) 463 4380 3330	NESS (CA,MG) (MG/L) 472 370 330	CAR- BONATE HARD- NESS (MG/L) 315 228	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1110 923 830	7.6 8.0 8.0
DCT. 22 NDV. 25 DEC. 30 JAN. 30 FEB. 09 MAR.	(NO3) (MG/L) 4.4 3.0 2.9 3.1	PHDS- PHATE (PO4) (MG/L) .00 .00	(B) (UG/L) 0 0 9	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 84 681 607	SOLVED SOLIDS (TDNS PER AC-FT) .11 .93 .83	SOLVED SOLIDS (TONS PER DAY) 463 4380 3330 2940	NESS (CA, MG) (MG/L) 472 370 330	CAR- BONATE HARD- NESS (MG/L) 315 228 191	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1110 923 830 760	7.6 8.0 8.0 7.7
OCT. 22 NOV. 25 DEC. 30 JAN. 30 FEB. 09 MRR. 06 APR.	(NO3) (MG/L) 4.4 3.0 2.9 3.1 2.7	PHDS— PHATE (PO4) (MG/L) .00 .00 .00	(B) (UG/L) 0 9 0	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 84 681 607 533	SOLVED SOLIDS (TONS PER AC-FT) .11 .93 .83 .72	SOLVED SOLIDS (TONS PER DAY) 463 4380 3330 2940 3050	NESS (CA,MG) (MG/L) 472 370 330 300 290	CAR- 80NATE HARD- NESS (MG/L) 315 228 191 163	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1110 923 830 760 760	7.6 8.0 8.0 7.7 7.7
OCT. 22 NOV. 25 DEC. 30 JAN. 30 FEB. 09 NAR. 06 APR. 24 MAY	(NO3) (MG/L) 4.4 3.0 2.9 3.1 2.7	PHOS- PHATE (PO4) (MG/L) .00 .00 .00 .03 .D1	(B) (UG/L) 0 9 0	SOLVED SQLIDS (RESI- DUE AT 180 C) (MG/L) 84 681 607 533 536	SOLVED SOLIDS (TONS PER AC-FT) .11 .93 .83 .72 .73	SOLVED SOLIDS (TONS PER DAY) 463 4380 3330 2940 3050 3340	NESS (CA,MG) (MG/L) 472 370 390 290 278	CAR- BONATE HARD- NESS (MG/L) 315 228 191 163 159	AD- SORP- TION RATIO	FIC COD- UCTANCE (MICRO- MHOS) 1110 923 830 760 760 732	(UNITS)  7.6  8.0  8.0  7.7  7.7
OCT. 22 NOV. 25 DEC. 30 JAN. 30 FEB. 09 MAR. 06 APR. 24 HAY. 18 JUNE 29	(NO3) (MG/L) 4.4 3.0 2.9 3.1 2.7 2.9	PHOS- PHATE (PO4) (MG/L) .00 .00 .00 .03 .D1 .04	(B) (UG/L) 0 9 0 0	SOLVED SOLLOS (RESI-DUE AT 180 C) (MG/L)  84 681 607 533 536 516 582	SOL VED SOL IDS (170NS PER AC-FT)  .11 .93 .83 .72 .73 .70	SOL VED SOL LOS (TONS PER DAY) 463 4380 3330 2940 3050 3340 3130	NESS (CA, MG) (MG/L) 472 370 330 300 290 278 310	CAR- 80NATE HARD- NESS (MG/L) 315 228 191 163 159 147	1.2 1.4 1.4 1.3 1.4	FIC COND- UCTANCE (MICRO- MHOS) 1110 923 830 760 760 732	(UNITS)  7.6  8.0  8.0  7.7  7.7  8.1  7.9
OCT. 22 NDV. 25 DEC. 30 30 FEB. 09 MAR. 06 APR. 24 AY 18 JUNE 29 JULY	(NO3) (MG/L) 4.4 3.0 2.9 3.1 2.7 2.9 3.5	PHOS- PHATE (P04) (MG/L) -00 -00 -03 -D1 -04 -02	(B) (UG/L) 0 9 0 0	SOL VED SOL LOS (RES) - DUE AT 180 C) (MG/L)  84  681  607  533  536  516  582  278	SOL VED SOL IDS (170NS PER AC-FT)  .111 .93 .83 .72 .73 .70 .79	SOL VED SOL LOS (TONS PER DAY) 463 4380 3330 2940 3050 3340 3130 6520	NESS (CA,MG) (MG/L) 472 370 330 300 290 278 310	CAR- BONATE HARD- NESS (MG/L) 315 228 191 163 159 147 170	1-2 1-4 1-3 1-4 1-4	FIC COMP- UCTANCE (MICRO- MHDS)  1110  923  830  760  760  732  797	(UNITS)  7.6  8.0  8.0  7.7  7.7  8.1  7.9
OCT. 22 NDV. 25 DEC. 30 JAN. 30 FEB. 09 MAR. 24 APR. 24 JUNE 29 JUNE	(NO3) (NG/L) 4.4 3.0 2.9 3.1 2.7 2.9 3.5 3.4	PHDS- PHATE (PO4) (MG/L)	(B) (UG/L) 0 9 0 0 0	SOL VED SOL LOS (RES) - DUE AT 180 C) (MG/L)  84  681  607  533  536  516  582  278	SOL VED SOL IDS (170NS PER AC-FT)  .111 .93 .83 .72 .73 .70 .79 .38	SOL VED SOL LOS (TONS PER DAY) 463 4380 3330 2940 3050 3340 3130 6520 6870	NESS (CA, MG/L) 472 370 330 300 290 278 310 160 134	CAR- BONATE HARD- NESS (MG/L) 315 228 191 163 159 147 170 71	1.2 1.4 1.3 1.3 1.4 1.4	FIC COND- UCTANCE (MICRO- HHOS)  1110  923  830  760  760  732  797  395	(UNITS)  7.6  8.0  8.0  7.7  7.7  8.1  7.9  7.5

#### GUNNISON RIVER BASIN

### 09152500 GUNNISON RIVER NEAR GRAND JUNCTION, COLO. -- Continued

	SPEC	IFIC CONDU	JCTANCE	(MICROMHOS/	CM AT 25° ONCE-DAIL			OBER 1969	TO SEPTI	EMBER 1970	0	
DAY	ост	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	1190	834	782	771	680	695	678	434	657	1230	1240
2	1180	1030	838	797	744	815	724	704	565	711	1220	1210
2 3	1160	1010	938	759	713	971	702	721	604	864	1210	1230
4	1230	1000	970	728	736	892	653	702	551	435	1220	1210
5	1550	1020	90L	708	759	805	597	573	582	488	1240	1240
6	1210	1010	881	754	759	752	700	552	582	692	1180	1150
7	1150	997	1020	707	777	714	680	498	448	941	1170	1070
8	1080	981	1480	708	761	689	676	471	500	960	1220	1040
9	1090	978	1620	681	749	682	686	462	693	562	1190	1090
10	1400	962	1130	713	767	691	654	520	706	657	1190	1110
11	1750	1000	878	735	789	693	668	505	690	620	1220	1080
12	1910	987	821	755	755	698	700	458	716	432	1200	1080
13	1190	972	827	777	765	698	733	412	670	422	1190	990
14	1150	975	809	771	801	660	737	403	503	520	1220	1000
15	1110	960	813	771	773	658	751	422	503	1130	1220	891
16	1100	1000	809	765	730	764	793	433	606	1150	1210	901
17	1070	1040	805	786	718	731	780	435	721	1210	1290	934
18	1140	1020	799	805	704	745	765	404	673	1170	1200	948
19	1110	931	803	837	670	706	900	405	646	1130	1180	957
20	1100	874	807	936	677	664	921	392	634	1130	907	984
21	1070	895	853	860	705	667	851	378	387	584	1300	1000
22	1210	894	870	841	732	666	870	406	396	1040	1190	997
23	1200	902	893	859	709	663	850	386	537	1190	1130	1020
24	1100	891	978	866	706	647	921	342	612	1190	1140	1000
25	1170	871	866	884	697	646	798	360	547	1170	1170	1000
26	1240	876	988	891	684	639	778	448	537	1190	1160	1010
27	1250	871	861	864	685	639	680	458	399	1010	1180	990
28	1140	850	853	879	681	638	603	463	349	1020	1180	997
29	1040	830	801	864		636	575	490	340	1170	1230	1010
30	1160	328	795	759		640	622	544	512	1230	1220	1000
31	1070		781	725		675		446		1190	1230	
AVG	1200	955	902	789	732	704	732	479	554	898	1190	1050

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	DCT	404	DEC	VAL	FE8	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	8.0	2.0	0.0	2.0	6.0	4.0	8.5	12.0	16.5	20.5	19.5
2	11.0	7.0	2.0	0.0	2.0	6.0	5.0	7.0	13.0	16.5	19.0	17.0
3	12.0	5.5	4.0	0.0	1.0	5.0	6.5	9.5	14.5	18.0	22.0	17.0
4	10.0	5.5	3.0	0.0	3.0	5.5	5.5	11.0	15.0	16.5	21.5	16.0
5	10.0	6.0	4.0	0.0	3.5	6.0	6.0	11.0	14.0	17.0	21.5	15.0
6	9.5	7.0	2.0	0.0	3.5	6.0	7.0	11.0	15.0	18.0	21.0	12.0
7	10.0	7.0	3.0	0.0	4.5	6.0	9.0	10.5	13.5	19.0	20.5	14.0
а	10.5	6.5	1.5	0.0	5.0	6.0	9.5	10.0	13.5	20.5	21.5	15.0
9	11.0	7.0	1.5	0.5	4.0	6.5	8.5	9.0	14.0	18.5	21.5	16.5
10	11.0	6.0	1.0	0.0	4.5	6.5	10.0	9.0	12.0	18.0	20.5	16.5
11	10.0	7.0	1.5	1.0	3.5	4.5	9.5	11.0	12.0	17.0	18.0	16.0
12	8.0	8.0	3.0	2.0	5.5	4.5	7.0	11.5	11.0	16.5	19.5	16.5
13	7.0	7.0	2.0	1.5	7.0	5.5	6.5	10.5	14.5	19.0	18.5	15.5
14	9.0	7.0	3.0	1.5	8.0	5.5	7.0	10.5	14.5	16.5	20.5	15.5
15	9.0	5.5	3.0	1.5	4.5	7.0	8.0	9.5	14.5	19.0	20.0	14.5
16	9.0	8.0	1.5	1.5	4.0	5.5	8.0	11.0	14.5	19.5	18.5	14.5
17	8.5	6.5	3.0	3.0	4.5	6.5	8.0	11.5	15.5	20.5	20.0	14.0
18	10.0	4.5	2.0	1.0	3.0	4.0	7.0	13.0	16.0	20.0	19.0	13.5
19	9.0	4.0	3.0	0.0	3.0	3.5	7.0	12.0	16.5	21.0	21.0	14.5
20	8.0	3.5	3.5	3.0	3.5	4.5	6.0	10.5	16.5	21.5	18.5	15.5
21	8.0	3.5	4.5	1.0	4.5	5.0	7.0	11.5	15.0	21.5	18.5	14.5
22	8.5	4.0	6.0	1.0	4.0	5.5	6.5	11.5	15.0	19.0	19.0	13.0
23	8.5	5.0	5.5	4.5	6.5	6.0	7.0	12.0	16.0	16.0	18.5	13.5
24	9.5	7.0	5.0	4.5	6.0	6.5	7.0	12.0	18.0	19.5	19.0	13.5
25	9.5	6.5	4.5	4.5	5.5	6.5	9.0	12.0	17.0	21.0	18.5	11.5
26	4.5	5.5	4.5	7.0	6.0	5.5	10.0	13.0	16.5	19.5	18.0	10.5
27	8.5	5.5	2.0	8.0	4.5	4.5	10.5	13.5	16.5	18.5	20.0	11.5
28	9.5	2.0	1.0	7.0	5.0	1.5	6.0	13.5	18.5	18.5	19.0	12.0
29	10.0	3.0	1.0	1.5		6.0	6.0	14.0	15.5	19.0	20.0	12.0
30	7.0	1.0	0.5	1.0		7.0	5.0	14.5	15.5	21.0	20.0	14.5
31	6.5		0.0	1.5		5.5		12.0		20.0	19.0	
AVG	9.2	5.6	2.7	1.8	4.3	5.4	7.3	11.1	14.8	18.7	19.7	14.5

### 09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE

LOCATION.--Lat 39°09'00", long 108°57'00", in sec.25, T.10 S., R.104 W., Mesa County, at gaging station 4.8 miles downstream from Salt Creek, 6.5 miles southwest of Mack, Colo., and 7.2 miles upstream from Colorado-Utah State line.

DRAINAGE AREA. -- 17,900 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: September 1969 to August 1970.

CHEMICAL ANALYSES, SEPTEMBER 1969 TO AUGUST 1970

DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SDDIUM (NA) (MG/L)	PD- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SD4) (MG/L)	CHLO- RIDE (CL) (MG/L)
SEPT 196	9								
10	3810 3810	20.0 20.0	143 147	54 54	134 134	5.0 5.0	222 238	552 552	95 95
07 NOV.	5380	10.0	118	42	107	4.7	205	412	78
19 DEC.	4720	3.0	93	39	101	3.5	191	325	86
29 JAN 1970	3810	0.5	82	38	91	3.6	181	269	84
20 FEB.	4050	2.0	77	39	96	4.2	182	262	100
10 MAR.	3810	3.0	80	30	99	2.6	174	264	89
11 APR.	4630	5.0	75	28	86	3.4	180	226	82
09 MAY	4030	12.0	63	31	87	3.8	165	221	80
05 JULY	7960	13.5	69	22	60	3.4	165	178	52
02 AUG.	13200	18.0	52	14	38	2.4	117	122	31
14	3570	22.0	122	41	111	4.3	192	400	85
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG (MG/L	CA BON HAR		SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	H4
SEPT 1969									
10 10 OCT.	1140 1140	1.50 1.52	11700 11700	577 591		195 196	2.4 2.4	1490 1490	7.8 7.7
07 NOV.	925	1.26	13400	469	. 3	101	2.1	1260	7.7
19 DEC.	803	1.09	10200	392	. 2	35	2.2	1150	7.6
29 JAN 1970	714	• 97	7350	360	2	12	2.1	1060	7.1
20 FEB.	737	1.00	8060	352	. 2	103	2.2	1060	7.8
10 MAR.	693	• 94	7130	323	1	.80	2.4	1040	7.7
11 APR.	636	•86	7950	304	1	.56	2.2	956	7.8
09 MAY	620	-84	6750	285	1	.50	2 • 2	925	7.9
05 JULY	509	.69	10900	261	. 1	.26	1.6	769	8.0
02 AUG.	350	•48	12500	186		90	1.2	534	7.6
14	940	1.28	9060	474	3	13	2 • 2	1300	8.3

#### DOLORES RIVER BASIN

### 09177100 SAN MIGUEL RIVER BELOW URAVAN, COLO.

LOCATION.--Lat 38°23'08", long 108°45'28", in SW4NW4 sec.28, T.48 N., R.17 W., Montrose County, at bridge just downstream from Atkinson Creek, 1.9 miles northwest of Uravan.

DRAINAGE AREA. -- 1,549 sq mi.

PERIOD OF RECORD, -- Chemical analyses: August 1969 to July 1970.

CHEMICAL ANALYSES, AUGUST 1969 TO JULY 1970

		CHEMI	CAL ANALT	3E3, AUG	31 1707	10 3021 1	,,,		
DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
AUG 1969 28	86	20.0	144	72	81	5.4	128	644	65
SEP. 18	199	15.5	106	46	46	3.6	132	367	72
18 OCT.	199	15.5	117	40	46	3.6	119	367	72
16	196 196	8 • 5 8 • 5	91 88	50 50	38 38	3.6 3.3	65 58	388 388	42 32
NOV. 13	150	5.5	110	57	56	4.4	61	546	45
DEC. 11	107	0.0	105	58	69	8.5	177	497	64
JAN 1970 15 FEB.	107	1.0	113	124	88	13	128	840	94
12 MAR.	100	4.5	104	73	73	7.5	138	578	66
12 JUNE	166	5.5	111	63	75	6.1	148	495	70
04	1200 700	13.0 15.0	48 51	12 16	13 15	1.8 2.0	86 103	106 128	11 8.8
JULY 16	293	19.5	64	33	34	3.9	113	252	36
			• •	55	٠.	• • •			30
DAT	DIS SOLV SOLI (RES DUE 180 E (MG/	DS SOLVE I SOLID AT (TONS C) PER	D SOLVE S SOLID (TONS PER	D	HARI S) NESS	R- AD ATE SORP D- TIO S RATI	- FI - CON N UCTA	C D- NCE P RO-	H ITS)
AUG 1	969								
28 SEP.		0 1.4	6 25	6 657	7 55	52 1.	4 14	90	7.1
18 18 OCT.							9 10 9 10		7.3 7.0
16 16 NOV.							8 10 8 9		6.7 6.7
13 DEC.	. 88	1.2	1 36	0 512	2 46	51 1.	1 12	30	7.0
11 JAN 1		3 1.2	1 25	8 500	35	54 1.	3 13	50	7.8
15 FEB.		1.9	6 41	9 796	69	91 1.	3 21	60	7.4
12 MAR.						8 1.			7.2
JUNE									7.4
04 18 JULY									7•5 7•6
16	. 49	1 .6	7 38	8 296	20		9 7	80	7.6

## 09179500 DOLORES RIVER AT GATEWAY, COLO.

39

LOCATION.--Lat 38°40'52", long 108°05'18", Mesa County, 500 ft downstream from bridge on State Highway 141 and 0.3 mile west of Gateway.

DRAINAGE AREA. -- 4,350 sq mi.

PERIOD OF RECORD. -- Chemical analyses: January to July 1970.

REMARKS. -- Records of discharge are given for Dolores River near Cisco, Utah (station 09180000).

CHEMICAL ANALYSES, JANUARY TO JULY 1970

OATE	OIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	CAL- CIUM (CA) (MG/L)	MAG- NE- Sium (MG) (MG/L)	SDDIUM (NA) (MG/L)	PD- TAS+ SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
JAN.									
15	200	1.0	106	45	39B	20	164	325	587
FEB.									
12	195	1.0	104	48	411	22	166	343	609
MAR.									
12	231	5.0	103	61	519	26	166	35B	825
APR.									
24	597	13.0	78	30	127	7.7	181	206	164
JUNE									
04	1930	11.5	44	10	24	2.3	108	7.2	29
18	1270	20.0	53	14	52	4.0	128	100	72
JULY									
16	394	21.0	68	23	174	9.4	108	176	255

DATE	SOLVED SULIDS (RESI- OUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	OIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SDDIUM AD- SORP- TION RATIO	SPECI- FIC CDND- UCTANCE (MICRD- MHOS)	PH (UN1TS)
JAN.								
15	1590	2.12	859	447	313	8.2	2680	7.5
FEB.								
12	1700	2.23	895	457	321	8.4	2780	7.5
MAR.								
12	2050	2.68	1280	505	369	10	3380	7.5
APR.								
24	737	1.00	1190	317	169	3.1	1190	8.0
JUNE								
04	256	.35	1330	153	64	• B	414	7.8
18	397	.54	1360	191	86	1.6	635	7.8
JULY								
16	813	1.11	865	264	176	4.7	1350	7.6

#### DOLORES RIVER BASIN

#### 09180000 DOLORES RIVER NEAR CISCO, UTAH

LOCATION. --Lat 38°47'50", long 109°11'40", in SW4SE4, sec.18, T.23 S., R.25 E., Grand County, at gaging station 9 miles upstream from mouth, 13.5 miles downstream from Colorado-Utah State line, and 14 miles southeast of

DRAINAGE AREA. -- 4,580 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: March 1951 to September 1969 (daily), October 1969 to September 1970

(monthly). Water temperatures: March 1951 to September 1959, October 1964 to September 1970. Sediment records: March 1951 to September 1964.

CIS- CIS-

EXT REMES . -- 1969-70:

Specific conductance: Maximum daily, 5,750 micromhos Jan. 8; minimum daily, 300 micromhos May 21.
Water temperatures: Maximum, 26.0°C Aug. 17; minimum, freezing point on many days during December and January.

Period of record:
Dissolved solids (1953-69): Maximum, 8,220 mg/l Mar. 4, 1964; minimum, 200 mg/l June 1-10, 1957, May 1-31, 1958.

1995.
Haximum, 1,900 mg/l Sept. 21-30, 1956; minimum, 132 mg/l May 1-31, 1958.
Specific conductance: Maximum daily, 12,800 micromhos Mar. 4, 1964; minimum daily, 254 micromhos May 8, June 6, 1852.
Water temperatures (1951-59, 1968-70): Maximum, 29.5°C Aug. 14, 1958; minimum, freezing point on many days during winter periods.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARCE (CFS)	SILICA (SIC2) (MG/L)	CIS- SOLVEC CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SCDILM (NA) (MG/L)	PO- TAS- SILM (K) (MG/L)	BICAR- BUNATE (HCO3) (MG/L)	CAR- BENATE (CG3) (MG/L)	SULFATE (SC4) (MG/L)	CHL 0- RICE (CL) (MG/L)	DIS- SCLVED FLUO- RIDE (F) (MG/L)
CCT.		240							_			
23 NOV.	1100	269		105	42	294	17	141	9	368	440	
14 JAN.	11 30	276		91	43	25C	13	171	C	312	359	
13 F&B.	1115	200	7.8	111	5¢	623	26	173	c	359	942	-4
16 MAR.	1050	220	4.7	1 07	48	567	28	168	r	336	865	. 3
13 APR.	1036	170	5 • C	103	54	544	27	146	c	386	825	.3
13 MAY	1410	790	5.5	94	25	94	7.1	155	0	232	110	.4
15 JUNE	1230	3930	7.1	38	9.2	13	2.3	114	c	4.8	16	.3
12 JULY	1240	1680	6.4	54	18	45	3.3	128	c	120	51	.4
14 AUG.	1110	478	7.0	72	23	143	7.8	137	c	177	200	•3
14 SEP.	1309	139	5.4	107	37	1 96	11	138	G	321	290	•5
17	10 50	1020	8. C	72	17	35	4.3	133	ę.	172	29	•1

OA TE	NITRATE (N) (MG/L)	DIS- SCLVED BORON (B) (UG/L)	SGLVEC SCLICS (RESI- DUE AT 185 C) (MG/L)	SOLVED SOLIDS (SUM CF CONSTI- TUENTS) (MG/L)	CIS- SOLVEO SCLIES (TGNS PER AC-FT)	DIS- SOL VED SCL IDS (TCNS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NCN- CAR- BONATE FARD- NESS (MC/L)	SODIUM AD- SORP- TICN RATIC	SPECI- FIC COND- LCTANCE (*ICFC- MHOS)	PH {UNITS}
CCT.											
23 NGV.			1420	1340	1.93	1030	436	32C	6.1	1920	7.3
14 JAN.			1170	1150	1.56	872	401	261	5.4	1960	7.8
13		120	2 24 C	2210	3.01	2990	483	341	12	378C	7.7
FEB.		110	2090	2050	2.79	1240	466	328	11	3470	7.6
MAR. 13 APR.	••	450	2160	20 20	2.75	946	478	358	11	3426	7.6
13		70	673	651	• 92	1440	314	186	2.3	1030	7.9
15 JUNE		30	219	194	.30	2320	132	39	.5	313	7.5
12 JULY		40	394	367	.54	1790	269	164	1.4	619	7.9
14 AUG.	3.4	20	735	712	1.00	949	273	161	3.8	1190	8.0
14 SEP.	3.8	20	1100	1057	1.43	413	42	3∩7	4 • 2	1700	8.0
17		40	398	405	.54	1100	250	141	1.0	673	7.4

### 09180000 DOLORES RIVER NEAR CISCO, UTAH .-- Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

					(ONCE-D	AILY MEAS	UREMENT)					
DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
			2440	26.20		2050	2550			072		1000
1 2	2240		2440 2800	2520 3380	3650 4210	3050 3160	2550 2560	551	434 413	872 882	1960	1800
3	3000	2540	2770	3380	5490	3280	2520	574	422	902	2260	
4		2640	2630	5170	5010	4090		551	436	1040	3520	
5	3360	2890	2440	5160	3500	4950	2620	516	456	1260	3170	
6	3090	3050	2180	4970	3090	4410	2740			1290	2050	1390
7	2650	2290	2100	5210	3090	4410	3010	406	561	1320	2030	1140
à	2440		2310	5750	2210	3740	2990	391	491	1220		587
9	2030	3500	2650	5600		3450	2920			1060		602
10	2090	3530			2390	3200	2420	371		1190		637
11	2250	3360		5300	2590	3250			632			828
12	2370	3050	2720	4710	2950	3380	1360	380	636	1350		
13		2000		3780	2820	3670	1250	361		1320		861
14	2530	1950	2860	3390			1070	354	677	1210		1020
15				2720	2570				683			1340
16	2620	1920	2900			4060	1140	329	678	1460		1160
17	2810	1920	2830			4450	1140	329	677	1440	3200	685
18	2840	2240	2710	3190	2590	4490		324	669	1180	2550	1160
19		2320	2850	3220	2630	4610	1130	322	638	1400	2410	
20	2750	2560		3170	2860	4660	1110	327			2190	
21		2520	3310	3070			1160	300	559	1990	1890	958
22	1970	2320	3310	2770	3200	4730	1260	311	567	2880	1090	1060
23	2330	2310	2350	2870	3020	4900	1450	304	587	2660	1230	1150
24		2300	3020		2960	5270			620		1160	1410
25	2390	2260		3110	2830	4870	1380	315	674		1030	
26	2530	2130			2700		1080	323	. 7.		1280	1510
27	2650	2130		3130	2860		1000	323	676		1690	1820
28	2970	1750	3110	3110			692	342	683		1730	
29	2800	1910	3020	2990		4180	640	373	748			2060
30	2190	2250	2810	3130			493	777			1770	2270
31			2720			2650		425			1770	
AVG		2470					1690					
		TE	1PERATURE	(°C) OF 1			OCTOBER 19	969 TO SE	TEMBER 1	970		
					(ONCE-DA	AILY MEAS	UREMENT)					
DAY	00.1	TE!	1PERATURE DEC	(°C) OF I				969 TO SER	TEMBER 1	970 JUL	AUG	SEP
Đ <b>AY</b> 1				0.0	(ONCE-DA	AILY MEAS	UREMENT)	MAY		JUL 21.0		SEP 23.0
1 2	14.0	NOV	DEC 1.0 1.0		FEB 1.0 2.0	MAR 5.0 6.0	4PR 8.0 9.0	MAY  10.5	JUN 14.0 14.5	JUL 21.0 21.0	25.5	23.0
1 2 3	14.0	NOV  8.0	DEC 1.0 1.0 2.0	JAN 0.0 0.0	FEB 1.0 2.0 2.0	MAR 5.0 6.0 6.0	APR 8.0 9.0 10.0	MAY  10.5 12.5	JUN 14.0 14.5 14.0	JUL 21.0 21.0 22.0	25.5 25.0	23.0
1 2 3 4	14.0	NOV  8.0 8.0	DEC 1.0 1.0 2.0 2.0	JAN 0.0 0.0 	FEB 1.0 2.0 2.0 2.0	MAR 5.0 6.0 6.0	APR 8.0 9.0 10.0	MAY  10.5 12.5 14.0	JUN 14.0 14.5 14.0 12.5	JUL 21.0 21.0 22.0 22.0	25.5 25.0 24.5	23.0
1 2 3	14.0	NOV  8.0	DEC 1.0 1.0 2.0	JAN 0.0 0.0	FEB 1.0 2.0 2.0	MAR 5.0 6.0 6.0	APR 8.0 9.0 10.0	MAY  10.5 12.5	JUN 14.0 14.5 14.0	JUL 21.0 21.0 22.0	25.5 25.0	23.0
1 2 3 4 5	14.0 14.0  12.0	8.0 8.0 8.0	DEC 1.0 1.0 2.0 2.0 1.0	JAN 0.0 0.0  0.0 0.0	FEB 1.0 2.0 2.0 2.0	MAR 5.0 6.0 6.0	APR  8.0 9.0 10.0 11.0	MAY 10.5 12.5 14.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0	JUL 21.0 21.0 22.0 22.0 23.0	25.5 25.0 24.5 24.5	23.0
1 2 3 4 5	14.0 14.0  12.0 12.0	NOV  8.0 8.0 8.0	DEC 1.0 1.0 2.0 2.0 1.0	JAN 0.0 0.0  0.0 0.0	FEB 1.0 2.0 2.0 2.0 3.0 3.0	MAR 5.0 6.0 6.0 6.0 6.0	APR 8.0 9.0 10.0 11.0 12.0 12.0	MAY  10.5 12.5 14.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0	JUL 21.0 21.0 22.0 22.0 23.0 23.0	25.5 25.0 24.5 24.5	23.0   18.5 18.0
1 2 3 4 5 6 7 8	14.0 14.0  12.0 12.0 12.0	8.0 8.0 8.0 8.0	DEC 1.0 1.0 2.0 2.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0	FEB 1.0 2.0 2.0 2.0 3.0 3.0 3.0	MAR 5.0 6.0 6.0 6.0 6.0 9.0	APR 8.0 9.0 10.0 11.0 12.0 12.0 14.0	MAY 10.5 12.5 14.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0	JUL 21.0 21.0 22.0 22.0 23.0 23.0 23.5 23.5	25.5 25.0 24.5 24.5	23.0  18.5 18.0 18.0
1 2 3 4 5 6 7 8	14.0 14.0  12.0 12.0 12.0 12.0	8.0 8.0 8.0 8.0	DEC 1.0 1.0 2.0 2.0 1.0	JAN 0.0 0.0  0.0 0.0	FEB 1.0 2.0 2.0 2.0 3.0 3.0	MAR 5.0 6.0 6.0 6.0 6.0 6.0 8.0 9.0	APR 8.0 9.0 10.0 11.0 12.0 12.0 14.0	MAY 10.5 12.5 14.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5	25.5 25.0 24.5 24.5	23.0  18.5 18.0 18.0
1 2 3 4 5 6 7 8 9	14.0 14.0 12.0 12.0 12.0 12.0 12.0	8.0 8.0 8.0 8.0	DEC 1.0 2.0 2.0 1.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	(ONCE-D/ FEB 1.0 2.0 2.0 2.0 3.0 3.0 3.0 4.0	MAR 5.0 6.0 6.0 6.0 6.0 6.0 8.0 7.0	APR 8.0 9.0 10.0 11.0 12.0 12.0 14.0	MAY 10.5 12.5 14.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0	JUL 21.0 21.0 22.0 22.0 23.0 23.0 23.5 23.5	25.5 25.0 24.5 24.5 24.0	18.5 18.0 18.0 21.5 21.5
1 2 3 4 5 6 7 8 9 10	14.0 14.0 14.0  12.0 12.0 12.0 12.0 11.0	8.0 8.0 8.0 8.0 8.0	DEC 1.0 1.0 2.0 2.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	(ONCE-DA) FEB 1.0 2.0 2.0 2.0 3.0 3.0 4.0 5.0	MAR 5.0 6.0 6.0 6.0 6.0 6.0 7.0	### APR ### 8.0 9.0 10.0 10.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	MAY 10.5 12.5 14.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0 12.5	21.0 21.0 22.0 22.0 23.0 23.0 23.5 23.0 22.5 24.0	25.5 25.0 24.5 24.5 24.0	23.0  18.5 18.0 18.0
1 2 3 4 5 6 7 8 9 10	14.0 14.0 12.0 12.0 12.0 12.0 12.0	8.0 8.0 8.0 8.0 8.0 8.0	DEC 1.0 1.0 2.0 2.0 1.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 2.0 3.0 3.0 4.0 5.0 5.0	MAR 5.0 6.0 6.0 6.0 6.0 8.0 7.0 8.0 7.0	APR 8.0 9.0 10.0 11.0 12.0 14.0 14.0 14.0	MAY 10.5 12.5 14.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0	25.5 25.0 24.5 24.5 24.0	23.0  18.5 18.0 18.0 21.5 21.5
1 2 3 4 5 6 7 8 9 10	14.0 14.0 12.0 12.0 12.0 12.0 12.0 12.0 10.0	8.0 8.0 8.0 8.0 8.0 8.0 8.0	DEC 1.0 1.0 2.0 2.0 1.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	(ONCE-DA) FEB 1.0 2.0 2.0 2.0 3.0 3.0 4.0 5.0	MAR 5.0 6.0 6.0 6.0 6.0 6.0 7.0 8.0 7.0	MPR  8.0 9.0 10.0 11.0 12.0 12.0 14.0 14.0 14.0 14.0	MAY 10.5 12.5 14.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0 12.5 14.0	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0	25.5 25.0 24.5 24.5 24.0	23.0 
1 2 3 4 5 6 7 8 9 10	14.0 14.0 14.0  12.0 12.0 12.0 12.0 11.0	8.0 8.0 8.0 8.0 8.0 8.0	DEC 1.0 1.0 2.0 2.0 1.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 2.0 3.0 3.0 3.0 5.0 5.0 5.0	MAR 5.0 6.0 6.0 6.0 6.0 8.0 7.0 8.0 7.0	APR 8.0 9.0 10.0 11.0 12.0 14.0 14.0 14.0	MAY 10.5 12.5 14.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0 12.5 14.0	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0	25.5 25.0 24.5 24.5 24.0	23.0  18.5 18.0 18.0 21.5 21.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14	14.0 14.0  12.0 12.0 12.0 12.0 11.0 10.0	N/JV  8.0 8.0 8.0 8.0 7.0 8.0 9.0 9.0 9.0	DEC 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 3.0 5.0 5.0 5.0 6.0	MAR 5.0 6.0 6.0 6.0 6.0 6.0 7.0 8.0 7.0 7.0 8.0	APR 8.0 9.0 10.0 12.0 12.0 14.0 14.0 14.0 14.0	MAY 10.5 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0 12.5 14.0 15.5 16.5	21.0 21.0 22.0 22.0 23.0 23.5 23.5 24.0 22.5 24.0 22.0 23.0	25.5 25.0 24.5 24.5 24.0	23.0 
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14.0 14.0 12.0 12.0 12.0 12.0 11.0 10.0 10.0	NOV  8.0 8.0 8.0 8.0 7.0 8.0 9.0 9.0 9.0	DEC 1.0 2.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB  1.0 2.0 2.0 2.0 3.0 3.0 4.0 5.0 5.0 5.0 6.0	MAR 5.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 10.0	APR 8.0 9.0 10.0 11.0 12.0 12.0 14.0 14.0 14.0 10.0 9.0	MAY 10.5 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.5 15.0 14.5 15.0 16.5	21.0 21.0 22.0 22.0 23.0 23.5 23.5 23.0 20.5 24.0 22.5 24.0 22.0 23.0	25.5 25.0 24.5 24.5 24.5 24.0	23.0  18.5 18.0 18.0 21.5 21.5 21.5 21.5 21.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14.0 14.0 12.0 12.0 12.0 12.0 10.0 10.0 10.0	N/JV  8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	DEC 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 5.0 5.0 5.0 5.0 6.0	MAR 5.0 6.0 6.0 6.0 6.0 7.0 8.0 7.0 8.0 7.0 10.0	APR 8.0 9.0 10.0 11.0 12.0 14.0 14.0 14.0 14.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAY 10.5 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	JUN 14.0 14.5 14.0 12.5 15.0 15.5 16.5 16.5 18.5	21.0 21.0 22.0 22.0 23.0 23.5 23.5 24.0 22.5 24.0 22.0 23.0	25.5 25.0 24.5 24.5 24.5 24.0	23.0  18.5 18.0 18.0 21.5 21.5 21.5 21.5 17.5 17.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14.0 14.0 12.0 12.0 12.0 12.0 11.0 10.0 10.0	N/JV  8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	DEC 1.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 2.0 3.0 3.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5	MAR 5.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0	### APR ### APPR ###	MAY 10.5 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0 14.0 14.0	JUN 14.0 14.5 14.0 12.5 14.5 15.0 14.5 15.6 16.5 16.5 18.5	21.0 21.0 22.0 22.0 23.0 23.5 23.0 23.5 24.0 22.5 24.0 22.5 24.0 22.0 23.5	25.5 25.0 26.5 24.5 24.5 24.0	23.0  18.5 18.0 18.0 21.5 21.5 21.5 21.5 21.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	14.0 14.0 12.0 12.0 12.0 12.0 12.0 11.0 10.0 10	N/JV  8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	DEC 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 5.0 5.0 5.0 5.0 6.0	MAR 5.0 6.0 6.0 6.0 6.0 7.0 8.0 7.0 8.0 7.0 10.0	APR 8.0 9.0 10.0 11.0 12.0 14.0 14.0 14.0 14.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAY 10.5 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	JUN 14.0 14.5 14.0 12.5 15.0 15.5 16.5 16.5 18.5	21.0 21.0 22.0 22.0 23.0 23.5 23.5 23.0 20.5 24.0 22.5 24.0 22.0 23.0	25.5 25.0 24.5 24.5 24.5 24.0	23.0  18.5 18.0 21.5 21.5 21.5 21.5 19.0 18.5 17.5 17.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	14.0 14.0 12.0 12.0 12.0 12.0 12.0 10.0 10.0 10	NOV	DEC 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 2.0 3.0 3.0 5.0 5.0 5.0 6.0 6.0 5.0	AILY MEAS  MAR  5.0 6.0 6.0 6.0 6.0 7.0 8.0 7.0 8.0 9.0 10.0 7.0 7.0 7.0	### APPR ###	MAY  10.5 12.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0 15.5 14.0 15.5 16.5 18.5 19.0	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0 22.0 23.5 24.0 22.0 23.5 24.0 23.5	25.5 25.0 24.5 24.5 24.5 24.0 	23.0 
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	14.0 14.0  12.0 12.0 12.0 12.0 11.0 10.0 10.0  9.0 9.0 9.0	N/JV  8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0	DEC 1.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	(ONCE-D/ FEB 1.0 2.0 2.0 3.0 3.0 4.0 5.0 5.0 5.0 6.0 5.0	AILY MEAS MAR 5.0 6.0 6.0 6.0 6.0 7.0 7.0 8.0 7.0 10.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	### APPR ###	MAY 10.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 12.5 14.0 14.5 15.0 15.5 16.5 16.5 18.5 19.0 19.0 20.0	JUL 21.0 22.0 22.0 23.0 23.0 23.5 23.0 22.5 24.0 22.0 22.0 23.0 22.5 24.0 22.0	25.5 25.0 24.5 24.5 24.5 24.0 	23.0   18.5 18.0 18.0 21.5 21.5 21.5 17.5 17.5 17.5 17.5
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	14.0 14.0 12.0 12.0 12.0 12.0 10.0 10.0 10.0 9.0 9.0 9.0	N/JV  8.0 8.0 8.0 8.0  7.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	DEC 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 3.0 3.0 5.0 5.0 5.0 6.0	AILY MEAS  MAR  5.0 6.0 6.0 6.0 6.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	### APR ### AP	MAY  10.5 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	JUN 14.0 14.5 14.0 12.5 14.0 12.5 14.0 14.5 15.0 16.5 16.5 18.5 19.0 10.0 20.0	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0 22.0 23.5 24.0 22.0 23.5 24.0 23.5 23.0 23.5 23.0 23.5	25.5 25.0 24.5 24.5 24.0 	23.0 
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	14.0 14.0  12.0 12.0 12.0 12.0 11.0 10.0 10.0  9.0 9.0 9.0	NOV	DEC 1.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	(ONCE-D/ FEB 1.0 2.0 2.0 3.0 3.0 4.0 5.0 5.0 5.0 6.0 5.0	AILY MEAS MAR 5.0 6.0 6.0 6.0 6.0 7.0 7.0 8.0 7.0 10.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	### APPR ###	MAY  10.5 12.5 12.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0 16.5 16.5 16.5 18.5 19.0 19.0 20.0 21.0 20.0 21.0 20.5	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0 22.0 23.5 24.0 22.0 23.5 24.0 23.5 23.5 23.5 24.0 23.5 23.5 23.5 23.5 23.5 23.5 24.0 23.5	25.5 25.0 24.5 24.5 24.5 24.0 	23.0   18.5 18.0 18.0 21.5 21.5 21.5 17.5 17.5 17.5 17.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	14.0 14.0 12.0 12.0 12.0 12.0 10.0 10.0 10.0 9.0 9.0 9.0	NOV	DEC 1.0 2.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 4.0 5.0 5.0 5.0 5.0 6.0 6.0	MAR 5.0 6.0 6.0 6.0 7.0 8.0 7.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	### APR ### AP	MAY  10.5 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	JUN 14.0 14.5 14.0 12.5 14.0 12.5 15.0 1 15.5 16.5 18.5 19.0 19.0 20.0 20.0 21.0	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0 22.0 23.5 24.0 22.0 23.5 24.0 23.5 23.0 23.5 23.0 23.5	25.5 25.0 24.5 24.5 24.0 	23.0 18.5 18.0 18.0 21.5 21.5 21.5 20.0 19.0 18.5 17.5 17.5 17.0 17.0 15.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 11 12 11 12 11 12 12 20 21 22 23 24 25	14.0 14.0  12.0 12.0 12.0 12.0 11.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0	NOV	DEC 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 3.0 5.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0	MAR 5.0 6.0 6.0 6.0 6.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	### APPR ###	MAY  10.5 12.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0 16.5 16.5 16.5 18.5 19.0 19.0 20.0 21.0 20.5 21.5	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0 22.0 23.0 23.0 22.5 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	25.5 25.0 24.5 24.5 24.0   26.0 25.0 25.0 23.0 23.0 23.0 24.5	23.0  18.5 18.0 21.5 21.5 21.5  20.0 19.0 17.5 17.5 17.0 17.0 15.0 15.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	14.0 14.0 12.0 12.0 12.0 12.0 10.0 10.0 10.0 9.0 9.0 9.0 9.0 10.0	NOV	DEC 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 4.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0	MAR 5.0 6.0 6.0 6.0 6.0 7.0 8.0 7.0 9.0 9.0 10.0 7.0 7.0 11.5	### APPR ###	MAY  10.5 12.5 12.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0 16.5 16.5 16.5 18.5 19.0 19.0 20.0 21.0 20.0 21.0 20.5	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0 22.0 22.0 23.5 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	25.5 25.0 24.5 24.5 24.0 	23.0  18.5 18.0 21.5 21.5 21.5 20.0 19.0 18.5 17.5 17.5 17.5 17.0 15.0 15.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 11 12 11 12 11 12 12 20 21 22 23 24 25	14.0 14.0  12.0 12.0 12.0 12.0 11.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0	NOV	DEC 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 3.0 5.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0	MAR 5.0 6.0 6.0 6.0 6.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	### APPR ###	MAY  10.5 12.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 14.5 15.0 16.5 16.5 16.5 18.5 19.0 19.0 20.0 21.0 20.5 21.5	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0 22.0 23.0 23.5 24.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23	25.5 25.0 24.5 24.5 24.0  25.0 25.0 23.5 23.5 24.0 23.5 24.0 23.5	23.0 18.5 18.0 21.5 21.5 21.5 17.5 17.0 17.0 15.0 14.5
1 2 3 4 5 6 7 8 8 9 10 11 12 13 11 4 15 16 17 18 19 20 21 22 23 24 25 26 27 28	14.0 14.0  12.0 12.0 12.0 12.0 11.0 10.0 10.0 9.0 9.0 9.0 9.0 10.0 10	NOV 	DEC 1.0 2.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 4.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0	MAR 5.0 6.0 6.0 6.0 8.0 7.0 8.0 7.0 8.0 7.0 10.0 10.0 10.0 10.0 10.0	### APPR ###	MAY 10.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 14.0 12.5 16.5 16.5 18.5 16.5 18.5 19.0 19.0 20.0 20.0 20.5 21.5 21.0	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.5 23.0 23.0 23.5 24.5 23.5 24.5 23.5 23.5 23.5 23.5 23.5 23.5 23.6 23.5 23.7 23.5 23.7 23.5 23.7 23.5 23.7 23.5	25.5 25.0 24.5 24.5 24.5 24.0  25.0 23.5 23.0 23.5 24.0 23.5 24.0 23.5 24.0	23.0 
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 5 26 27 28 29 30	14.0 14.0 12.0 12.0 12.0 12.0 12.0 10.0 10.0 	NOV	DEC 1.0 2.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 3.0 3.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0	MAR 5.0 6.0 6.0 6.0 8.0 7.0 8.0 7.0 8.0 7.0 10.0 11.5 10.0 11.5	### APPR ###	MAY 10.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 12.5 14.0 15.5 16.5 16.5 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0 22.0 22.0 23.5 24.0 22.0 23.0 23.5 24.0 23.5 23.0 23.5 24.0 23.5 23.5 24.0 23.5 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5	25.5 25.0 24.5 24.0 	23.0 18.5 18.0 21.5 21.5 21.5 17.5 17.0 17.0 15.0 14.5
1 2 3 4 5 6 7 8 8 9 10 11 12 13 11 4 15 16 17 18 19 20 21 22 23 24 25 26 27 28	14.0 14.0  12.0 12.0 12.0 12.0 11.0 10.0 10.0 9.0 9.0 9.0 9.0 10.0 10	NOV 	DEC 1.0 2.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 4.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0	MAR 5.0 6.0 6.0 6.0 7.0 8.0 7.0 8.0 7.0 10.0 11.5	### APPR ###	MAY 10.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 12.5 14.0 15.5 16.5 16.5 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.5 23.0 23.0 23.5 24.5 23.5 24.5 23.5 23.5 23.5 23.5 23.5 23.5 23.6 23.5 23.7 23.5 23.7 23.5 23.7 23.5 23.7 23.5	25.5 25.0 24.5 24.5 24.5 24.0  25.0 23.5 23.0 23.5 24.0 23.5 24.0 23.5 24.0	23.0  18.5 18.0 21.5 21.5 21.5 21.5 21.5 17.5 17.0 17.0 17.0 15.0 15.0 14.5 14.5
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 5 26 27 28 29 30	14.0 14.0  12.0 12.0 12.0 12.0 11.0 10.0 10.0 9.0 9.0 9.0 9.0 10.0 10	NOV	DEC 1.0 2.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 1.0 2.0 2.0 3.0 3.0 3.0 3.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0	MAR 5.0 6.0 6.0 6.0 7.0 8.0 7.0 8.0 7.0 10.0 11.5 10.0 11.5	### APPR ###	MAY  10.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 14.0 14.5 14.0 12.5 14.0 12.5 14.0 15.5 16.5 16.5 19.0 20.0 20.0 20.0 21.0 21.0 21.0 21.0 21	JUL 21.0 21.0 22.0 22.0 23.0 23.5 23.0 22.5 24.0 22.0 22.0 23.5 24.0 22.0 23.0 23.5 24.0 23.5 23.0 23.5 24.0 23.5 23.5 24.0 23.5 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5	25.5 25.0 24.5 24.0 	23.0 

## 09180500 COLORADO RIVER NEAR CISCO, UTAH (Irrigation network station)

LOCATION. --Lat 38°48'40", long 109°17'34", in NW\nW\square sec. 17, T. 23, S., R. 24 E., Grand County, at gaging station 1 mile downstream from Dolores River, 11 miles south of Cisco, 36 miles downstream from Colorado-Utah State line, 97 miles upstream from Green River, 235 miles upstream from San Juan River, and at mile 1,002.3.

DRAINAGE AREA. -- 24,100 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: August 1928 to September 1969 (daily), October 1969 to September 1970. Water temperatures: May 1949 to September 1959, October 1964 to September 1970. Sediment records: May 1930 to September 1970.

Specific conductance: Maximum daily, 1,590 micromhos Sept. 1; minimum daily, 360 micromhos May 25.
Water temperatures: Maximum, 25.0°C Aug. 12; minimum, freezing point on several days during December and Janu-

ary. Sediment concentrations: Maximum daily, 23,600 mg/l Sept. 7; minimum daily, 17 mg/l Dec. 29. Sediment discharge: Maximum daily, 949,000 tons Sept. 7; minimum daily, 179 tons Dec. 29.

Period of record:
Dissolved solids (1928-52, 1953-69): Maximum, 2,670 mg/l Aug. 11-21, 1940; minimum, 202 mg/l June 11-20, 1933, July 1-10, 1957.
Hardness (1928-35, 1943-52, 1953-69): Maximum, 1,090 mg/l Sept. 1-10, 1934; minimum, 131 mg/l June 11-20,

1952.
Specific conductance (1941-52, 1953-70): Maximum daily, 4,820 micromhos Dec. 13, 1957; minimum daily, 291 micromhos May 31, 1958.
Water temperatures (1949-52, 1953-59, 1964-70): Maximum, 29.5°C July 29, 1966; minimum, freezing point on many days during winter periods.
Sediment concentrations: Maximum daily, 69,000 mg/l Oct. 27, 1951; minimum daily, 4 mg/l Aug. 22, 1960.
Sediment discharge: Maximum daily, 2,790,000 tons Oct. 14, 1941; minimum daily, 14 tons Aug. 22, 1960.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

, DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOL VED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PD- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SUL FATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	OIS- SOLVED FLUO- RIDE (F) (MG/L)
CCT.												
07 JAN.	1255	5140	14	123	42	120	5.5	210	0	438	96	0.5
12	1315	4280	10	96	28	143	5.2	185	0	268	170	•4
FE8. 11	1310	3600	8.4	80	30	114	5.0	172	0	248	118	.4
MAR.		3000										
19	1215	4300	9.2	79	30	135	5.6	168	0	256	168	.3
AFR.										268	130	.5
08 May	1130	4120	6.4	78	28	119	5.4	154	0	200	130	•••
11	1330	15290	4.2	47	13	31	3.0	127	0	100	26	.3
JUNE	2330	13290	7.2	4,	.,	J.	3.0		-			
15	1250	22420	10	49	14	30	2.5	123	0	110	24	.4
JLLY												
15	1220	7100	9.8	64	20	75	3.8	134	0	168	92	.4
AUG.									_		4.50	_
17	1300	3180	9.3	127	47	145	6.2	196	9	392	152	• 5
21	1900	4200	12	113	46	116	6.8	199	0	404	90	•6
23	1845	5470	13	117	42	106	5.7	212	0	385	50	• 6
25	1830	4610	13	119	41	98	5.2	206	0	320	130	•7
27	1915	3800	13	123	43	102	5.0	202	0	320	130	•7
SEP.				-2-								
15	1400	10140						~~				

DATE	NITRATE (N) (MG/L)	DIS- SCLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SDLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVEO SOLIOS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARO- NESS (MG/L)	SODIUM AD- SORP- TIDN RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	
CCT. 07		90	981	948	1.33	13600	481	309	2.4	1360	7.6	
JAN. 12		50	883	823	1.20	10200	355	203	3.3	1330	7.2	
FE8.		60	765	698	1.04	7440	325	184	2.8	1130	7.2	
MAR. 19		80	779	771	1.06	9040	322	1 84	3.3	1210	8.0	
4PR. 08 Pay		80	751	715	1.02	8350	312	186	2.9	1130	8.0	
11		60	331	295	.45	13700	170	66	1.0	463	7.5	
15 JUL Y		40	324	303	.44	19600	180	79	1.0	493	7.7	
15 AUG.	.80	50	524	502			244	134	2.1	820	8.0	
17	2.0	120	1080	993	1.35	9270	508	333	2.8	1520	8.4	
21			1050	887	1.43	11900	471	308	2.3	1380	7.6	
23			988	824	1.34	14600	464	290	2.1	1310	7.4	
25			920	830	1.25	11500	388	219	2.0	1230	8.0	
27 SEP.			952	838	1.29	9770	484	318	2.0	1270	8.2	
15			823							1100	7.7	

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## 09180500 COLORADO RIVER NEAR CISCO, UTAH--Continued

		SPECIEIC	CONDUCTANO		ALIOS / CM AT		•			EDTEMBED	1070	
		JFECTIFIC	CONDOCTANO	E (MICKU	(ONCE-	DAILY MEA	SUREMENT)	OCTOBER	1909 10 3	EFIEMBEN	1910	
DAY	OCT	NON	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		1180	1140	1130	1070	948	918		396	488		1590
2	1330		1180	1220	1070	966 957	948 960	688 770	415 460	516 562	1220 1240	1410
	1350	1130 1130	1170 1170	1260	1210 1150	1010	980	786	455	657	1310	1400
5	1290	1150	1150	1350	1110	1070	915	815	450	522	1290	
6	1360	1190		1290	1110	1030	912			565	1290	1270
ĭ	1290	1160	1160	1270				599	430	646	1370	1440
8	1250		1190	1320	1040	994	980	558	435	706		1110
9 10	1250	1190	1230	1330	1060	978	951 950	501	528	752 640	1270 1210	1040 1090
10	1240	1150			1060	969	950	501	520	640		
11	1220	1170	1490	1240	1060	1000		490	524		1230	1120
12	1370	1140	1220	1270	1050	975 954	903 864	540 525	523	671 582	1220 1270	1140
14	1230	1140	1120	1140	2070	774	866	448	501	584	1300	1150
15	1210			1080	1050				493			1060
16	1190	1110	1120		1010	939	915	445	477	849	1350	953
17	1180	1170	1110			960	904	439	526	917	1370	933
18	1150	1160	1130	1090	986	948		438	545		1370	984
19		1150	1100	1090	993	1000	896	422	510	1000	1440	
20	1150	1190		1090	990	942	924	397		1010	1380	
21	1150	1140	1130	1080			973	391	477	1040		1070
22 23	1150	1200	1100	1100	973 986	912 942	967	376	413 410	935		1110 1130
24	1150	1150	1110	1100	1010	942	970	369	472	1250	1250	1160
25	1180	1120		1090	990	933	951	360	424	1140		
26	1170	1110		1100	980	920	986	363	417	1090	1220	1160
27	1180			1090	970	920	930			1110		1150
28	1200	1110	1110	1100			890	367	407		1320	1120
29	1150	1110	1130	1100		912	775	364	397	1060	1380	1120
30 31	1160 1180	1130	1140			898	661	382		1080 1210	1440	1140
					1040	960	913			830		1160
									462			
AVG	1220	1150			2040	700	,,,					
AVG	1220											
AVG	1220		EMPERATURE		NATER, WAT	ER YEAR O	CTOBER 19	69 TO SEP				
		TI	EMPERATURE	(°C) OF 1	NATER, WAT (ONCE-DA	ER YEAR O ILY MEASU	CTOBER 19 REMENT)		TEMBER 19	70	AUG	
DAY	oc r	T I	EMPERATURE DEC	(°C) OF N	NATER, WAT (ONCE-DA	ER YEAR O ILY MEASU MAR	CTOBER 19 REMENT) APR	MAY	TEMBER 19 JUN	70 JUL	AUG	SEP
DAY 1	001	TI	EMPERATURE DEC 1.0	(°C) OF N JAN 0.0	NATER, WAT (ONCE-DA FEB 1.0	ER YEAR O ILY MEASU MAR 6.0	CTOBER 19 REMENT) APR 8.0	MAY	TEMBER 19 JUN 12.0	JUL 17.5		SEP 22•0
DAY 1 2	OCT	NUV 9.0	DEC	(°C) OF N	NATER, WAT (ONCE-DA FEB	ER YEAR O ILY MEASU MAR 6.0 5.0	CTOBER 19 REMENT) APR 8.0 9.0	MAY	JUN 12.0 12.0	JUL 17.5 18.0	23.0	SEP 22•0 22•5
DAY 1	001	T I	EMPERATURE DEC 1.0	(°C) OF N JAN 0.0 0.0	NATER, WAT (ONCE-DA FEB 1.0	ER YEAR O ILY MEASU MAR 6.0	CTOBER 19 REMENT) APR 8.0	MAY	TEMBER 19 JUN 12.0	JUL 17.5		SEP 22•0
DAY 1 2 3	OCT	9.0 7.0	DEC 1.0 1.0 1.0	(°C) OF N	FEB	ER YEAR D ILY MEASU MAR 6.0 5.0 6.0	CTOBER 19 REMENT) APR 8.0 9.0 8.0	MAY  10.0 12.5	JUN 12.0 12.0 12.0 12.5	JUL 17.5 18.0 19.0	23.0 23.0	SEP 22•0 22•5
DAY 1 2 3 4	14.0 14.0 11.0	71 NOV 9.0 7.0 7.0	DEC 1.0 1.0 1.0 2.0	JAN 0.0 0.0 0.0 0.0	NATER, WAT (ONCE-DA FEB 1.0 2.0 2.0 3.0	ER YEAR O ILY MEASU MAR 6.0 5.0 6.0 6.0	CTOBER 19 REMENT)  APR  8.0 9.0 8.0 9.5	MAY  10.0 12.5 14.0	JUN 12.0 12.0 12.5 12.0	JUL 17.5 18.0 19.0	23.0 23.0 23.0	SEP 22.0 22.5 22.5
DAY  1 2 3 4 5	14.0 14.0 11.0	7.0 7.0 7.0 7.0	DEC 1.0 1.0 1.0 2.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0	NATER, WAT (ONCE-DA FEB 1.0 2.0 2.0 3.0	ER YEAR O ILY MEASU MAR 6.0 5.0 6.0 6.0	CTOBER 19 REMENT)  APR  8.0 9.0 8.0 9.5	MAY  10.0 12.5 14.0 12.5	JUN 12.0 12.0 12.5 12.0 12.5	JUL 17.5 18.0 19.0 19.0 19.0	23.0 23.0 23.0 23.0	SEP 22.0 22.5 22.5 18.0 17.5
DAY 1 2 3 4 5 6 7 8	14.0 14.0 11.0 11.0 12.9	7.0 7.0 7.0 7.0	DEC 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0	FEB 1.0 2.0 2.0 3.0 4.0 5.0	ER YEAR O ILY MEASU MAR 6.0 5.0 6.0 6.0 6.0 7.0	CTOBER 19 REMENT)  APR 8.0 9.0 8.0 9.5 11.0 12.0	MAY 10.0 12.5 14.0 12.5	JUN 12.0 12.0 12.5 12.0 12.5	JUL 17.5 18.0 19.0 19.0 19.0 19.0	23.0 23.0 23.0 22.0 22.0	SEP 22.0 22.5 22.5 18.0 17.5 18.0
DAY  1 2 3 4 5	14.0 14.0 11.0	7.0 7.0 7.0 7.0	DEC 1.0 1.0 1.0 2.0 1.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0	NATER, WAT (ONCE-DA FEB 1.0 2.0 2.0 3.0	ER YEAR O ILY MEASU MAR 6.0 5.0 6.0 6.0	CTOBER 19 REMENT)  APR  8.0 9.0 8.0 9.5	MAY 10.0 12.5 14.0 12.5	JUN 12.0 12.0 12.5 12.0 12.5	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0	23.0 23.0 23.0 23.0 22.0	SEP 22.0 22.5 22.5 18.0 17.5 18.0 20.0
DAY  1 2 3 4 5 6 7 8 9 10	14.0 14.0 14.0 11.0 11.0 12.0 12.0	7.0 7.0 7.0 7.0 7.0	DEC 1.0 1.0 2.0 1.0 2.0 1.0	(°C) OF N	NATER, WAT (ONCE-DA FEB 1.0 2.0 2.0 2.0 3.0 4.0  5.0 6.0	ER YEAR O ILY MEASU MAR 6.0 5.0 6.0 6.0 7.0 8.0 8.0 7.0	CTOBER 19 REMENT)  APR  8.0 9.0 8.0 9.5 11.0 12.0 12.5	MAY 10.0 12.5 14.0 12.5 14.0 12.0 11.5	JUN 12.0 12.0 12.5 12.0 12.5 14.0 14.0 11.5	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 19.5	23.0 23.0 23.0 22.0 22.0 23.0 22.0 23.0	SEP 22.0 22.5 22.5 18.0 17.5 18.0 20.0 21.0
DAY 1 2 3 4 5 6 7 8 9	14.0 14.0 11.0 12.0 12.0 12.0 12.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0	DEC 1.0 1.0 2.0 1.0 2.0 1.0 2.0	(°C) OF N	NATER, MAT (ONCE-DA FEB 1.0 1.0 2.0 2.0 3.0 4.0  5.0 6.0	ER YEAR O ILY MEASU MAR 6.0 5.0 6.0 6.0 6.0 7.0  8.0 7.0	APR 8.0 9.0 8.0 9.5 11.0 12.0 12.5	MAY 10.0 12.5 14.0 12.5 14.0 12.0 12.0 11.5	JUN 12.0 12.0 12.5 12.0 12.5 12.0 12.5	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 20.0 19.5	23.0 23.0 23.0 23.0 22.0 22.0 23.0 23.0	SEP 22.0 22.5 22.5 18.0 17.5 18.0 20.0
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13	0CT 14.0 14.0 11.0 12.0 12.0 12.0 10.0	7.0 7.0 7.0 7.0 7.0	DEC 1.0 1.0 2.0 1.0 2.0 1.0	(°C) OF )  JAN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	NATER, WAT (ONCE-DA FEB 1.0 2.0 2.0 2.0 3.0 4.0  5.0 6.0	ER YEAR O ILY MEASU MAR 6.0 5.0 6.0 6.0 7.0 8.0 8.0 7.0	APR 8.0 9.0 8.0 9.5 11.0 12.5 12.5 10.5 10.0	MAY 10.0 12.5 14.0 12.5 14.0 12.0 11.5	JUN 12.0 12.0 12.5 12.0 12.5 14.0 14.0 11.5	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 19.5	23.0 23.0 23.0 22.0 22.0 23.0 22.0 23.0	SEP 22.0 22.5 22.5 18.0 17.5 18.0 20.0 21.0
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14	0CT 14.0 11.0 11.0 12.0 12.0 10.0 10.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0	DEC 1.0 1.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	(°C) OF N	NATER, WAT (ONCE-DA FEB 1.0 2.0 2.0 3.0 4.0 	ER YEAR O ILY MEASU MAR 6.0 6.0 6.0 6.0 6.0 7.0 8.0 8.0 7.0 7.0	CTOBER 19 REMENT)  APR 8.0 9.0 8.0 12.0 12.5 12.5 10.5 10.9	MAY 10.0 12.5 14.0 12.5 11.5 14.0 12.0	JUN 12.0 12.5 12.5 12.5 12.5 14.0 14.0 12.5 11.0 12.5 11.0 12.0 12.0 14.0 12.0 12.0 14.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 20.0 19.5	23.0 23.0 23.0 22.0 22.0 23.0 22.0 23.0 23	SEP 22.0 22.5 18.0 17.5 18.0 20.0 21.0 21.0 20.0 21.0
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13	0CT 14.0 14.0 11.0 12.0 12.0 12.0 10.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0	DEC 1.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0	(°C) OF N	NATER, WAT (ONCE-DA FEB 1.0 2.0 2.0 2.0 3.0 4.0  5.0 6.0 6.0	ER YEAR O ILY MEASU MAR 6.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0	APR 8.0 9.0 8.0 9.5 11.0 12.5 12.5 10.5 10.0	MAY 10.0 12.5 14.0 12.5 11.5 14.0 12.0 12.0	JUN 12.0 12.0 12.5 12.0 12.5 14.0 14.0 11.5	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 20.0 19.5 20.0 20.5	23.0 23.0 23.0 22.0 22.0 22.0 23.0 23.0	SEP  22.0 22.5 22.5 18.0 17.5 18.0 20.0 21.0
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	0CT 14.0 14.0 11.0 12.0 12.0 12.0 10.0 10.0 9.0	710 NOV 9.0 7.0 7.0 7.0 6.0 6.0 7.0 7.0 8.0 8.0	DEC 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	(°C) OF N	NATER, WAT (ONCE-DA FEB 1.0 2.0 2.0 3.0 4.0 	ER YEAR O TLY MEASU MAR 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0	APR 8.0 9.0 8.0 9.5 11.0 12.5 12.5 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAY 10.0 12.5 14.0 12.5 14.0 12.0 12.0 12.5 12.0	JUN 12.0 12.5 12.0 12.5 12.0 12.5 12.0 12.5 14.0 14.0 15.0 12.5 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.5 19.5 20.5 19.0	23.0 23.0 23.0 22.0 22.0 23.0 23.0 23.0	SEP 22.0 22.5 22.5 18.0 20.0 20.0 21.0 21.5 20.0 20.0 17.5
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	0CT 	7.0 7.0 7.0 7.0 7.0 6.0 7.0 7.0 8.0 8.0 8.0	DEC 1.0 1.0 1.0 1.0 1.0 2.0 1.0 2.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	(°C) OF N	#ATER, HAT (ONCE-DA FEB 1.0 2.0 3.0 4.0  5.0 6.0 6.0 5.0 6.0	ER YEAR O ILY MEASU MAR 6.0 6.0 6.0 7.0 8.0 7.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0	REMENT)  APR 8.0 9.0 8.0 9.5 11.0 12.5 12.5 10.5 10.5 9.0 9.0 9.0	MAY 10.0 12.5 14.0 12.0 11.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0	JUN 12.0 12.0 12.0 12.0 12.5 12.0 12.5 14.0 14.0 11.5 11.5 11.0 15.0 14.0 16.0	JUL 17.5 18.0 19.0 19.0 19.0 20.0 2	23.0 23.0 23.0 22.0 22.0 23.0 22.0 23.0 24.0 23.0 24.0 23.0 24.0 23.5 24.0	SEP 22.0 22.5 22.5 22.5 18.0 17.5 18.0 21.0 21.0 21.7 20.0 17.5
DAY  1 2 3 4 5 6 7 8 9 10 11 L2 13 14 15 16 17 18	0CT 14.0 14.0 11.0 12.0 12.0 12.0 10.0 10.0 9.0	710 NOV 9-0 7-0 7-0 7-0 7-0 7-0 7-0 8-0 8-0 8-0 8-0 8-0 4-0	DEC 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	(°C) OF )  JAN  0.0  0.0  0.0  0.0  0.0  0.0  0.0  0	(ATER, MATER) (ONCE-DA FEB 1.0 2.0 3.0 3.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	ER YEAR O TILY MEASU MAR 6.0 6.0 6.0 6.0 7.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	APR 8.0 8.0 8.0 8.0 12.0 12.5 12.5 12.5 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	HAY 10.0 12.5 14.0 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.5 12.0 12.5 12.5	JUN 12.0 12.0 12.5 12.0 12.5 12.0 12.5 11.0 12.0 14.0 12.0 15.0 14.0 15.0 16.0	JUL 17.5 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.5 19.0 20.5 19.0	23.0 23.0 23.0 22.0 22.0 23.0 22.0 23.0 23	SEP 22.0 22.5 22.5 18.0 20.0 20.0 21.0 21.5 20.0 20.0 17.5
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	0CT 14.0 11.0 12.0 12.0 10.0 10.0 9.0 9.0 9.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 6.0 7.0 8.0 8.0 8.0 8.0	DEC 1.0 1.0 1.0 1.0 1.0 2.0 1.0 2.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	(°C) OF N	#ATER, WAT (ONCE-DA FE8 1.0 2.0 3.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0	ER YEAR O ILY MEASU MAR 6.0 6.0 6.0 7.0 8.0 7.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0	REMENT)  APR 8.0 9.0 8.0 9.5 11.0 12.5 12.5 12.5 10.5 10.5 10.5 10.5 11.0	MAY 10.0 12.5 14.0 12.0 11.5 14.0 12.0 12.0 12.0 12.0 12.5 12.5 12.5 12.5	JUN 12.0 12.0 12.0 12.0 12.5 12.0 12.5 14.0 14.0 11.5 11.5 11.0 15.0 14.0 16.0	JUL 17.5 18.0 19.0 19.0 20.0 2	23.0 23.0 23.0 22.0 22.0 23.0 23.0 23.0	SEP 22.0 22.5 22.5 22.5 18.0 17.5 18.0 21.0 21.0 21.7 20.0 17.5
DAY  1 2 3 4 5 6 7 8 9 10 11 L2 13 14 15 16 17 18 19 20	0CT 14.0 11.0 12.0 12.0 10.0 10.0 9.0 9.0 9.0 9.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 4.0 3.0	DEC 1.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	(°C) OF )  JAN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	(ATER, MATER) (ONCE-DA FEB 1.0 2.0 3.0 3.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	ER YEAR OUT MERSU MAR 6.0 5.0 6.0 7.0 8.0 7.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	CTOBER 19 REMENT)  APR 8.0 9.0 8.0 9.5 11.0 12.9 12.9 12.9 10.5 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAY  10.0 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	JUN 12.0 12.0 12.5 12.5 12.5 12.5 14.0 14.0 11.5 11.5 11.0 12.0 14.0 15.0 14.0 16.0 16.0	JUL 17.5 18.0 19.0 19.0 20.0 20.0 20.0 20.5 19.5  21.0 20.5 20.0 20.5 20.0 20	23.0 23.0 23.0 22.0 22.0 23.0 23.0 23.0	SEP 22.0 22.5 22.5 22.5 18.0 17.5 18.0 21.0 21.0 21.5 21.7 17.0 17.5
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DAY  1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	0CT 14.0 14.0 11.0 11.0 12.0 12.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 4.0 3.0	DEC 1.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	(°C) OF )  JAN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	ATER, MATERIA (ONCE-DA) FEB 1.0 2.0 2.0 3.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	ER YEAR OUT MEASU MAR 6.0 5.0 6.0 7.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	CTOBER 19 REMENT)  APR 8.0 9.0 8.0 9.5 11.0 12.9 12.9 12.9 10.5 10.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MAY  10.0 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	TEMBER 19  JUN  12.0 12.0 12.5 12.5 12.5 12.5 11.5 11.0 12.0 14.0 15.0 14.0 16.0 16.0 16.0 16.5 17.5	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.5 19.5 20.0 20.5 20.0 2	23.0 23.0 23.0 22.0 22.0 23.0 23.0 23.0	SEP 22.0 22.5 22.5 22.5 18.0 17.5 18.0 21.0 21.0 21.5 21.7 17.0 17.0 17.0 17.0
DAY  1 2 3 4 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	0CT 14.0 14.0 11.0 11.0 12.0 12.0 10.0 10.0 9.0 9.0 9.0 9.0 8.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 4.0 3.0 3.0	DEC 1.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	(°C) OF )  JAN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	ATER, MATERIAN (ONCE-DA) FEB 1.0 2.0 2.0 3.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	ER YEAR O 1 LY MEASU MAR 6.0 6.0 6.0 7.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	CTOBER 19 REMENT)  APR 8.0 9.0 8.0 9.5 11.0 12.5 12.5 10.0 9.0 9.0 9.0 9.0 11.5	MAY  10.0 12.5 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	TEMBER 19  JUN  12.0 12.0 12.5 12.0 12.5 12.0 12.5 11.0 12.0 14.0 11.5 11.0 12.0 15.0 16.0 16.0 16.0 17.5 17.0	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.5 19.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0	23.0 23.0 23.0 22.0 22.0 23.0 23.0 23.0	SEP 22-0 22-5 22-5 22-5 17-5 18-0 17-5 18-0 20-0 21-5 20-0 20-0 17-5 17-0 17-0 17-0
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23	0CT 14.0 14.0 11.0 11.0 12.0 12.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 4.0 4.0 4.0 3.0 3.0	DEC 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	(°C) OF 1	(ATER, MAT (DNCE-DA FEB 1.0 2.0 2.0 3.0 4.0  5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	ER YEAR O 1LY MEASU MAR 6.0 6.0 6.0 6.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	APR 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	MAY 10.0 12.5 14.0 12.5 14.0 12.0 12.0 12.0 12.5 12.5 12.5 12.5 12.5 12.5 12.5	JUN 12.0 12.0 12.0 12.5 12.0 12.5 12.0 14.0 14.0 12.5 11.0 12.0 14.0 16.0 16.0 16.0 16.0 16.0 17.0 17.5	JUL 17.5 19.0 19.0 19.0 19.0 20.0 20.0 20.0 20.5 19.0 20.5 19.0 21.0 22.0 21.0 22.0	23.0 23.0 23.0 22.0 22.0 23.0 23.0 24.5 25.0 24.0 23.0 24.5 25.0 23.0 24.0 23.0 24.0 23.0 24.0 23.0	SEP 22-0 22-5 22-5 22-5 18-0 17-5 18-0 20-0 21-5 17-0 17-5 17-0 17-0 17-0 17-0 17-0 17-0
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DAY  1 2 3 4 5 5 6 7 8 9 10 11 11 12 13 11 15 16 17 18 11 17 18 11 17 12 20 21 22 23 22 24 25 26 27	0CT 14.0 14.0 11.0 11.0 12.0 12.0 10.0 10.0 9.0 9.0 9.0 9.0 9.0 0.0 0.0 0.0 0.0	7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 3.0 3.0 3.0 3.0	DEC 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	(°C) OF N	ATER, MATERIAN (ONCE-DA) FEB 1.0 2.0 2.0 3.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	ER YEAR O 1 LY MEASU MAR 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0	CTUBER 19 REMENT)  APR 8.0 9.0 8.0	MAY 10.0 12.5 14.0 12.5 14.0 12.0 12.5 12.0 12.5 12.0 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5	TEMBER 19  JUN  12.0 12.0 12.5 12.0 12.5 12.0 14.0 14.0 15.0 14.0 15.0 16.0 16.0 16.0 17.5 17.0 17.5 17.5	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.5 19.5 20.5 20.5 20.5 21.0 22.0 21.0 22.0 22.0	23.0 23.0 22.0 22.0 23.0 22.0 23.0 23.0	SEP 22.0 22.5 22.5 22.5 18.0 17.5 18.0 21.0 21.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28	0CT 14.0 14.0 14.0 12.0 12.0 12.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.	710 NOV 9-0 7-0 7-0 7-0 7-0 7-0 7-0 8-0 8-0 8-0 8-0 3-0 3-0 3-0 3-0 3-0	DEC 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	(°C) OF 1	AATER, MAT (ONCE-DA FEB 1.0 2.0 3.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	ER YEAR O ILY MEASU MAR 6.0 6.0 6.0 6.0 7.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	CTOBER 19 REMENT)  APR 8.0 8.0 8.0 8.0 1.0 12.5 11.0 12.5 10.0 9.0 9.0 11.0 9.0 11.5 10.0 9.0 11.5 11.5 10.0	MAY 10.0 12.5 14.0 12.5 14.0 12.0 12.0 12.0 12.5 12.0 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5	JUN  12.0 12.0 12.0 12.5 12.0 12.5 12.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 17.5 17.5 17.5 17.5	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.5 20.0 20.5 21.0 22.0 22.0 22.0 22.0	23.0 23.0 23.0 22.0 23.0 22.0 23.0 23.0	SEP 22-0 22-5 22-5 22-5 17-5 18-0 17-5 18-0 20-0 21-5 20-0 20-0 17-5 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0
DAY  1 2 3 4 5 5 6 7 8 9 10 11 11 12 13 11 15 16 17 18 11 17 18 11 17 12 20 21 22 23 22 24 25 26 27	0CT 14.0 14.0 11.0 12.0 12.0 10.0 10.0 9.0 9.0 9.0 9.0 10.0 10.0 1	7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 4.0 3.0 3.0 3.0 3.0	DEC 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	(°C) OF N	ATER, MATERIAN (ONCE-DA) FEB 1.0 2.0 2.0 3.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	ER YEAR O TILY MEASU MAR 6.0 6.0 6.0 6.0 7.0 8.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	CTUBER 19 REMENT)  APR 8.0 9.0 8.0 12.0 12.5 11.0 10.5 9.0 9.0 9.0 9.0 10.0 10.0 12.5 11.0 11.0 12.5 11.0 12.5 11.0 12.5 11.0 12.5 11.0 12.5 11.0 12.5 11.0 12.5 11.0 10.0	MAY 10.0 12.5 14.0 12.5 14.0 12.0 12.5 12.0 12.5 12.0 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5	TEMBER 19  JUN  12.0 12.0 12.5 12.0 12.5 12.0 14.0 14.0 15.0 14.0 15.0 16.0 16.0 16.0 17.5 17.0 17.5 17.5	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.5 19.0 20.5 20.5 20.5 20.5 20.0 21.0 22.0 22.0 22.0 22.0 22.0	23.0 23.0 22.0 22.0 23.0 22.0 23.0 24.5 25.0 24.0 23.0 24.5 25.5 24.0 23.5 24.0 23.5 24.0 23.5 23.0 23.0 23.5 24.0 23.5 23.0 23.5 23.0 23.5 23.0 23.5 23.5 23.0 23.5 23.5 23.5 23.5 23.5 23.5 23.5 23.5	SEP 22.0 22.5 22.5 22.5 18.0 17.5 18.0 21.0 21.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 114 15 16 17 118 119 20 21 22 23 22 5 26 27 28 29	0CT 14.0 14.0 14.0 12.0 12.0 12.0 10.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10.	710 NOV 9-0 7-0 7-0 7-0 7-0 7-0 7-0 8-0 8-0 8-0 8-0 3-0 3-0 3-0 3-0 3-0	DEC 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	(°C) OF 1	ATER, MATER (ONCE-DA FEB 1.0 2.0 2.0 3.0 4.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	ER YEAR O ILY MEASU MAR 6.0 6.0 6.0 6.0 7.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	CTOBER 19 REMENT)  APR 8.0 8.0 8.0 8.0 1.0 12.5 11.0 12.5 10.0 9.0 9.0 11.0 9.0 11.5 10.0 9.0 11.5 11.5 10.0	MAY 10.0 12.5 14.0 12.5 14.0 12.0 12.0 12.0 12.5 12.0 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5	JUN  12.0 12.0 12.0 12.5 12.0 12.5 12.0 14.0 14.0 15.0 15.0 16.0 16.0 16.0 16.0 17.5 17.5 17.5 17.5	JUL 17.5 18.0 19.0 19.0 19.0 20.0 20.0 20.0 20.5 20.0 20.5 21.0 22.0 22.0 22.0 22.0	23.0 23.0 23.0 22.0 23.0 22.0 23.0 23.0	SEP 22-0 22-5 22-5 22-5 17-5 18-0 17-5 18-0 20-0 21-5 20-0 20-0 17-5 17-0 17-0 17-0 17-0 17-0 17-0 17-0 17-0

5.0

10.5

14.5

20.5

23.0

18.0

AVG

10.0

5.0

### 09180500 COLORADO RIVER NEAR CISCO, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE. WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		OCTOBER			NOVEMBER			DECEMBER	
		MEAN			MEAN			ME AN	
DAY	MEAN H)ISCHARGE (CES)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TPATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3721	150	1510	5230	314	4430	4270	32	365 522
5	3760 3740	136 285	1380	5340 5320	224 135	3230 1940	4300 4380	45 40	522 473
4	4200	460	5220	5120	94	1300	4420	52	621
5	5400	720	10500	4920	90	1200	4530	45	550
5 7	5340 5140	1160 680	16700 9440	4970 4970	99 135	1330	4570	40 34	494 369
4	5050	360	4910	5010	104	1910 1410	4020 3230	32	279
9 10	5140 4460	268 197	3720 2370	5010	73	987	3010	32	560
-			=	5050	64	873	3090	41	342
11	4480 4860	130 820	3990 10800	5070 4990	87 82	1190 1100	4100 4200	60 51	664 578
13	5740	1190	18400	4950	66	588	4220	47	536
14 15	5650 5580	550 460	939n 6930	4880 4780	61 70	904	4240	43	492
						903	4240	40	458
16 17	5520 5740	3 <b>7</b> 5 362	5690 5650	4860 5140	410 1120	538n 1550n	4200 4120	36 34	408 378
14	5920	504	9060	5050	470	6410	4140	31	347
20 20	5620 5290	2460 2020	44000 34300	4800 4420	320 77	4150 919	4140 4220	26 28	291 319
					•			-	
21	5431 5291	99n 500	15400 7140	4320 4590	49 66	572 818	4280 4380	31 38	358 449
23	5450	302	4440	4780	82	1060	4400	31	368
24 25	5550 5340	307 312	4680 4500	4980 4970	84 229	1110 30 <b>7</b> 0	4420 4400	50 45	597 535
26	5250	313	4440						
27	5270	215	3050	4690 4420	289 289	2650 3340	4400 4250	40 35	475 403
29	5620	550	3340	4550	80	983	4220	30	342
29 30	5690 5830	580 680	8910 10700	4380 4200	53 32	627 363	3900 3500	17 21	179 198
31	5710	380	5860				3360	32	290
TOTAL	163420		277310	145660		70341	127110		12940
		JANIJARY			FEBRUARY			MARCH	
		MEAN			MEAN			MEAN	
	MF AN DISCHARGE	ME.AN CONCEN-	SEDIMENT DISCHARGE	MEAN DISCHAUGE	MEAN CONCEN~	SEDIMENT	MEAN DISCHARGE	MEAN CONCEN-	SEDIMENT
DAY	MF AN DISCHAPGE (CFS)	MEAN	SFD1MFNT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN	SEDIMENT DISCHARGE (TONSZOAY)	MEAN DISCHARGE (CFS)	MEAN	SEDIMENT DISCHARGE (TONS/DAY)
1	OISCHARGE (CFS)	MEAN CONCEN- TPATION (MG/L)	DISCHARGE (TONS/DAY) 247	DISCHARGE (CFS)	MEAN CONCEN- TPATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 4180	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TUNS/DAY)
5 J	01SCHARGE (CFS) 3270 3340	MEAN CONCEN- FPATION (MG/L) 28 71	DISCHARGE (TONS/DAY) 247 640	DISCHARGE (CFS) 3460 3820	MEAN CONCEN- TPATION (MG/L)	DISCHARGE (TONS/DAY) 449 526	DISCHARGE (CFS) 4180 4380	MEAN CONCEN- TRATION (MG/L) 89 112	DISCHARGE (TUNS/DAY) 1000 1320
1 2 3 4	DISCHARGE (CFS) 3270 3340 3340 3400	MF.AN CONCEN- TPATION (MG/L) 23 71 104 136	DISCHARGE (TONS/DAY) 247 640 938 1250	DISCHARGE (CFS) 3460 3820 3720 3760	MEAN CONCEN- TPATION (MG/L) 49 51 43 39	01scharge (TONS/DAY) 449 526 432 396	DISCHARGE (CFS) 4180 4380 4920 4820	MEAN CONCEN- TRATION (MG/L) 89 112 530 454	1000 1320 7040 5910
3 5 1	DISCHARGE (CFS) 3270 3340 3340 3400 3290	MEAN CONCEN- TPATION (MG/L) 28 71 104	DISCHARGE (TONS/DAY) 247 640 938	DISCHARGE (CFS) 3460 3820 3720	MEAN CONCEN- TPATION (MG/L) 49 51 43	01SCHARGE (TONS/DAY) 449 526 432	DISCHARGE (CFS) 4180 4380 4920	MEAN CONCEN- TRATION (MG/L) 89 112 530	DISCHARGE (TUNS/DAY) 1000 1320 7040
1 2 3 4 5	015CHARGE (CFS) 3270 3340 3340 3400 3290	ME.AN CONCEN- TPATION (MG/L) 28 71 104 136 74	DISCHANGE (TONS/DAY) 247 640 938 1250 657	DISCHARGE (CFS) 3460 3820 3720 3760 3860	MEAN CONCEN- TPATION (MG/L) 49 51 43 39 43	01scharge (TONS/DAY) 449 526 432 396 444	DISCHARGE (CFS) 4180 4380 4920 4820 4550	ME4N CONCEN- TRATION (MG/L) 89 112 530 454 684	DISCHARGE (TUNS/DAY) 1000 1320 7040 5910 8400
1 2 3 4 5 7 8	015CHAPSE (CF5) 3270 3340 3440 3400 3290 3250 3310 3210	MEAN CONCEN- TPATION (MG/L) 24 71 104 136 74 37 64	DISCHARGE (TONS/DAY) 247 640 938 1250 657 324 572 572	DISCHARGE (CFS) 3460 3820 3720 3760 3860	MEAN CONCEN- TPATION (MG/L) 49 51 43 39 43	01schauge (TONS/DAY) 449 526 432 396 444 396 400 413	DISCHARGE (CFS) 4180 4380 4920 4820 4550	MEAN CONCEN- TRATION (MG/L) 89 112 530 454 684	015CHARGE (TUNS/DAY) 1000 1320 7040 5910 8400 3520 3550
12345	015CHAPSE (CFS) 3270 3340 3340 3400 3290 3250 3310 3210 3090	MEAN CONCEN- TPATION (MG/L) 23 71 104 136 74 37 64 66	DISCHANGE (TONS/DAY)  247 640 938 1250 657 325 572 572 574	DISCHARGE (CFS)  3460  3820  3760  3860  3860  3870  3870  3870  3820  3820	MEAN CONCEN- TPATION (MG/L) 49 51 43 79 43	01SCHAUGE (TONS/DAY) 449 526 432 396 444 396 400 413 402	01SCHARGE (CFS) 4180 4380 4920 4820 4550 4400 4340 4340 4340	MEAN CONCEN- TRATION (MG/L) 89 112 530 454 684 295 300 304 263	DISCHARGE (TONS/DAY) 1000 1320 7040 5910 8400 3500 3520 3550 3100
1 2 3 4 5 7 9 10	01SCHAPGE (CFS) 3270 3340 3340 3400 3290 3250 3310 3210 3210 3690 3630	MEAN CONCEN- TPATION (MG/L.) 23 71 104 136 74 37 64 66 64 59	DISCHANGE (TONS/DAY)  247 640 938 1250 657  324 572 572 572 574 562	DISCHARGE (CF5)  3460  3720  3760  3860  3860  3870  3820  3820  3760	MEAN CONCEN- TPATION (MG/L) 49 51 43 39 43 34 39 36	NISCHAMGE (TONS/DAY) 449 526 432 396 444 196 400 413 402 365	019CHARGE (CF5) 4180 4380 4920 4820 4550 4400 4340 4320 4360 4670	MEAN CONCEN- TRATION (MG/L) 89 112 530 454 684 295 300 304 263 307	015CHĀRGE (TUNS/DAY) 1000 1320 7040 5910 8400 3520 3520 3550 3100 3870
1 2 3 4 5 5 7 9 4 10	UISCHAPSE (CFS)  3270 3340 3340 3440 3290 3250 3310 3210 3210 33530	MEAN CONCENTION (MG/L)  23 71 104 136 74 37 66 64 59	DISCHANGE (TONS/DAY)  247 640 938 1250 657 325 572 572 574 562	DISCHARGE (CFS)  3460 3860 3860 3860 3860 3860 38760 38760 38760 38760 38760 38760	MEAN CONCENTRATION (MG/L)  49 51 43 39 43 34 34 39 40	NI SCHAMGE (TONS/DAY) 449 526 432 396 444 396 400 413 402 365	015CHARGE (CFS) 4180 4380 4920 4820 4550 4400 4340 4340 43670 4590	MEAN CONCEN- TRATION (MG/L)  89 112 530 454 684 295 300 304 263 307	DISCHARGE (TUNS/DAY) 1000 1320 7040 5910 8400 3520 3550 3100 3870
1 2 3 4 5 7 9 9 10	DISCHAPER (CFS)  3270 3340 3340 3440 3290  3550 3310 3210 3210 3460 4200 4530	MEAN CONCEN- TPATION (MG/L)  23 71 104 136 74 66 64 69 59	DISCHARGE (TONS/DAY)  247 640 938 1250 657 324 572 572 534 562 563 2220 3350	DISCHARGE (CFS)  3460 3420 3720 3760 3860 3860 3860 3860 3760 3760 3760 3790 3790	MEAN CONCENTRATION (MG/L)  49 51 43 39 40 39 36	DISCHAMGE (TONS/JAY) 449 526 432 394 444 196 400 413 402 365 334 394 621	OISCHARRE (CFS) 4180 4380 4920 4820 4550 4409 4340 4340 4367 4570 4590 4650	MEAN CONCENTRATION (MG/L)  89 112 530 454 684 295 300 304 243 307 340 250 153	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3500 3550 3100 3870 4210 3140 1760
1 2 3 4 5 5 7 9 9 10 11 2 3 14	DISCHAPGE (CFS) 3270 3340 3340 3440 3440 3250 3310 3210 3210 3290 3510 3490 3510 4500 4500	MEAN CONCEN- TPATION (MG/L) 23 71 104 136 74 37 64 66 64 59 59	DISCHANGE (TONS/DAY) 247 640 933 1250 667 32- 572 574 562 563 3756 2790	D1SCHANGE (CFS) 3A-0 3B-20 3720 3760 3860 3860 3820 3760 3820 3760 3900 4200	MEAN CONCEN- TPATION (MG/L) 49 51 47 79 43 79 40 39 76 74 79 80	NISCHAMGE (TONS/DAY) 449 526 432 396 444 396 400 413 402 365 334 394 621 907	01SCHARGE (CFS) 4180 4380 4920 4920 4550 4407 4340 4340 4670 4560 4650 4260 4360	MEAN CONCEN- TRATION (MG/L)  89 112 530 454 684 295 300 304 263 307 340 250 153	01SCHARGE (TUNS/OAY) 1000 1320 7040 5910 8400 3500 3520 3550 3100 3870 4210 3140 1760 1660
12345 7949 101123145	015CHAPGE (CFS) 3270 3340 3340 3400 3290 3250 3310 3210 3210 3210 3210 3210 3210 321	ME AN CONCENTRATION (MG/L.)  2A 71 104 136 74 37 64 66 64 59 54 146 274 230 205	DISCHANGE (TONS/DAY) 247 640 934 1250 657 325 577 517 514 2220 3350 2790 2320	D1SCHANGE (CFS) 340 3820 3720 3760 3860 3860 3860 3820 3760 3820 3760 3820 3760 4200 4200	MEAN CONCEN- TPATION (MG/L)  49 41 43 49 40 39 40 39 36 39 36 102	NISCHAMGE (TONS/DAY) 449 526 432 396 444 396 400 413 402 365 337 394 621 907 1180	DISCHARGE (CFS)  4180 4390 4390 4820 4820 48550  4400 4320 4360 4360 4560 4260 4350 4400	MEAN CONCENTRATION (MG/L) 89 112 530 454 684 295 300 304 243 307 340 250 153 141 129	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3500 3520 3100 31500 3100 3100 3100 3100 3100 31
1 2 3 4 5 5 7 9 9 10 11 2 3 14	DISCHAPGE (CFS) 3270 3340 3340 3440 3440 3250 3310 3210 3210 3290 3510 3490 3510 4500 4500	MEAN CONCEN- TPATION (MG/L) 23 71 104 136 74 37 64 66 64 59 59	DISCHANGE (TONS/DAY) 247 640 933 1250 667 32- 572 574 562 563 3756 2790	DISCHANGE (CFS)  3640  3820  3770  3860  3860  3860  3870  3870  3870  3870  3690  3780  3000  4200  4180	MEAN CONCENTRATION (MG/L) 49 51 143 39 443 346 39 65 9 80 102 126	OISCHAMGE (TONS/)AY) 449 526 472 394 444 196 400 413 402 365 334 394 621 907 1180	DISCHARGE (CFS) 4180 4380 4920 4820 4850 4400 4340 4350 4550 4590 4590	MEAN CONCENTRATION (MG/L) 89 112 530 454 684 295 300 304 263 307 340 250 250 1153 141 129	01SCHARGE (TUNS/OAY) 1000 1320 7040 5910 8400 3500 3520 3550 3100 3870 4210 3140 1760 1660
1 2 3 4 5 7 7 9 4 10 11 2 13 14 15 16 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	UISCHAPGE (CFS) 3270 3340 3340 3440 3290 3250 3310 3210 3210 3210 3210 3450 4200 4440 4440 3940	ME AN CONCENT OF THE PATTON (MG/L)  29 711 104 136 74 136 64 66 64 59 64 196 67 197 197 197 197 197 197 197 197 197 19	DISCHANGE (TONS/DAY) 247 641 938 1256 657 325 572 574 562 220 3356 2730 2270 2370 2246	D1SCHAMGE (CFS)  3640  1820  1720  1750  3860  3860  3860  3860  3870  3870  3870  3890  4700  4100  4100  4100  4000	MEAN CONCENTRATION (MG/L)  49 51 43 39 43 39 43 39 60 102 126 83 50	OISCHAMGE (TONS/)AY) 449 526 432 396 444 196 400 413 402 365 394 621 907 1180 1420 914 545	01SCMARGE (CFS) 4180 4380 4920 4820 4550 4400 4340 4340 4340 4340 4350 4650 4250 4350 4400 4590 4650 4650 4650 4650 4650 4650	MEAN CONCENT ATTOM (MG/L)  89 112 530 454 684 245 684 245 300 300 300 300 300 314 117 117 117 117 117 117 117 117 117 1	01SCHARGE (TUNS/DAY) 1000 1320 7040 5910 8400 3520 3550 3100 3570 4210 3140 1760 1660 1530
1 2 3 4 5 5 7 9 9 10 11 12 13 14 5 16 17	UISCHAPGE (CFS) 3270 3340 3340 3440 3440 3250 3250 3210 3210 3210 3210 3210 3210 3210 321	MEAN CONCENT AT 10 MG/L)  24 71 104 136 74 37 64 66 64 59 59 54 196 275 205 208 201 201 201 201 201 201 201 201 201 201	DISCHANGE (TONS/DAY) 247 640 934 1250 657 325 577 577 514 2220 3350 2320 2270 2370 2270 2270 2270 2270 227	DISCHAMGE (CCF) 3640 3820 3720 3760 3860 3860 3860 3860 38760 3820 3820 3820 3820 4200 4200 4180 4080 4060	MEAN CONCENT AT 10 MG/L)  49 51 43 39 43 39 43 34 39 59 80 102	OISCHAMGE (TONS/DAY) 449 526 432 396 400 413 400 365 339 621 907 1180	DISCHARGE (CFS)  4180 4390 4390 4820 4820 4320 4340 4340 4340 4370 4590 4670 4590 4670	MEAN CONCENTRATION (MG/L)  89 112 530 454 684 295 300 304 263 107 340 250 153 141 129 117 191 346	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3520 3550 3100 3520 3100 3570 4210 3140 1760 1660 1539
1 2 3 4 5 5 7 9 9 1 11 12 13 14 15 16 17 11 12 20	UISCHAPGE (CFS) 3270 3340 3340 3440 3250 3310 3210 3210 3220 3480 4280 4480 4480 4480 4480 4490	MEAN CONCENT AT 10 MG/L)  28 71 104 136 74 37 64 66 64 59 59 54 196 273 205 208 201 214 203 154	DISCHANGE (TONS/DAY) 247 640 934 1250 657 325 577 577 514 2220 3350 2700 2700 2710 2710 2710	D1SCHAMGE (CFS) 3640 3820 3720 3760 3860 3860 3820 3820 3820 3820 3820 3820 3820 4000 4000 4180 4000 4000 3960	MEAN CONCENT 44 CONCENT 46 CONCEN	OISCHAMGE (TONS/JAY)  444 526 432 396 404 413 402 365 334 394 661 1907 1180 1420 914 545 515 492	DISCHARGE (CFS)  4180 4390 4390 4820 4820 4320 4340 4340 4370 4590 4670 4590 4670	MEAN CONCENTRATION (MG/L)  89 112 530 454 684 295 300 304 263 107 340 250 153 141 129 117 191 316 189 127	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3520 3550 3100 3570 4210 3140 1760 1650 1870 4200 4200 2340
1 2 3 4 5 5 7 9 9 10 11 12 13 14 15 14 15 16 17 19 20 21 22	UISCHAPGE (CFS) 3270 3340 3340 3440 3290 3250 3310 3210 3210 3210 3210 3460 4200 4440 4440 3440 3440 3440 3440	ME AN CONCENTRATION (MG/L)  27 11 104 77 110 77 104 77 10 77	DISCHANGE (TONS/DAY) 247 640 934 1250 657 325 572 572 574 570 3350 2700 2700 2700 2700 1700 1470	DISCHAMGE (CCF) 3640 3820 3720 3760 3860 3860 3860 3860 38760 3820 3820 3820 3820 4200 4200 4180 4080 4060	MEAN CONCENT AT 10 MG/L)  49 51 43 39 43 39 43 34 49 59 102 126 127 46 46	OISCHAMGE (TONS/JAY)  444 526 432 396 404 413 402 365 334 521 394 621 180 1420 914 545 515	DISCHARGE (CFS)  4180 4390 4390 4820 4820 4320 4340 4340 4340 4370 4590 4670 4590 4670	MEAN CONCENTRATION (MG/L)  89 112 530 454 684 295 300 304 263 107 340 250 153 141 129 117 191 186 127	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3520 3550 3100 3570 4210 3140 1760 1660 1630 4200 2340 1570 1200 935
1 2 3 4 5 5 7 9 9 10 11 12 13 14 15 16 17 11 12 20 21 22 23	UISCHAPGE (CFS) 3270 3340 3340 3340 3400 3290 3250 3310 3210 3210 3210 3210 3400 4200 4400 4400 4400 4400 4400 43960 43960 43960 43960 4000	MEAN CONCENT AT 11 104 134 134 134 134 134 134 134 134 134 13	DISCHANGE (TONS/DAY) 247 641 938 1256 657 325 572 572 534 562 220 3356 2730 2246 2246 2246 2246 2246 2246 2246 224	D1SCHAMGE (CF 5)  3640  3820  3770  3860  3860  3870  3870  3870  3870  3890  3790  3790  4700  4100  4180  4080  4080  3960  3960  3960  3960  3960	MEAN CONCENT 49 51 43 51 43 39 43 39 43 39 40 39 31 44 48 48 48 46 47	OISCHAMGE (TONS/)AY)  449 526 432 394 444 196 400 413 402 365 394 621 907 1180 1420 914 545 515 492 474 489 816	01SCMARGE (CFS) 4180 4380 4920 4820 4550 4400 4340 4340 4340 4570 4590 4650 4400 4590 4650 4590 4650 4590 4650 4650 4650 4650 4650 4650 4650 465	MEAN_CONCENT_PATION (MG/L)  89 112 530 454 684 295 300 300 300 300 300 300 153 141 129 117 117 117 117 117 117 117 117 117 11	DISCHARGE (TUNS/OAY)  1000 1320 7040 5910 8400 3520 3550 3100 3570 4210 3140 1760 1660 1530 1450 2400 4200 2340 1570 1200 935 891
1 2 3 4 5 5 7 9 9 10 11 12 13 14 15 14 15 16 17 19 20 21 22	UISCHAPGE (CFS) 3270 3340 3340 3440 3290 3250 3310 3210 3210 3210 3210 3460 4200 4440 4440 3440 3440 3440 3440	ME AN CONCENTRATION (MG/L)  27 11 104 77 110 77 104 77 10 77	DISCHANGE (TONS/DAY) 247 640 934 1250 657 325 572 572 574 570 3350 2700 2700 2700 2700 1700 1470	DISCHAMGE (CFS) 3640 3820 3720 3760 3860 3860 3860 3860 3760 3760 3760 3760 3760 3760 3760 37	MEAN CONCENT AT 10 MG/L)  49 51 43 39 43 39 43 34 49 59 102 126 127 46 46	DISCHAUGE (TONS/JAY)  44 <sup>4</sup> 526 432 396 404 413 407 365 333 394 621 907 1180 1420 614 545 515 492 47 489	DISCHARGE (CFS)  4180 4390 4390 4820 4820 4320 4340 4340 4370 4590 4590 4590 4590 4570	MEAN CONCENTRATION (MG/L)  89 112 530 454 684 295 300 304 263 107 340 250 153 141 129 117 191 186 127	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3520 3550 3100 3570 4210 3140 1760 1660 1630 4200 2340 1570 1200 935
1 2 3 4 5 5 7 7 7 9 3 1 1 1 1 2 1 4 1 5 1 4 1 5 1 6 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7	UISCHAPGE (CFS) 3270 3340 3340 3440 3290 7250 3310 3310 3310 3310 3450 4200 4440 4440 4440 4440 3440 3440 344	MEAN CONCENT OF MEAN CONCENT O	DISCHANGE (TONS/DAY) 247 640 934 1250 667 325 577 577 514 2220 3350 2730 2740 2740 2740 1700 1470 1544 1022 11 10	DISCHAMGE (CFS)  3640  3840  3720  3760  3860  3860  3860  3820  3820  3820  3820  3820  4200  4200  4180  4040  4040  4060  3960  3860  3860  3860	MEAN CONCENTRATION (MG/L)  49 51 43 39 43 39 40 39 16 102 126 127 47 46 46 46 73	OISCHAMGE (TONS/)AY) 449 526 432 396 400 413 402 365 334 394 621 907 1180 1420 614 545 515 492 474 489 816 567 661	DISCHARGE (CFS)  4180 4390 4390 4820 4850 4409 4340 4370 4550 4550 4550 4550 4570 4570 4570 45	MEAN_CONCENTRATION (MG/L)  899 112 5304 454 684 684 707 300 200 153 141 127 1346 187 127 107 78 78 81	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3520 3550 3100 3550 3100 3140 1766 1660 1650 2400 4200 2340 1570  1200 1200 935 891 971
1 2 3 4 5 5 7 7 9 4 9 10 11 12 13 14 5 16 7 1 1 1 1 2 0 12 2 3 4 2 5 6 2 7	UISCHAPGE (CFS) 3270 3340 3340 3440 3290 3250 3310 3210 3210 3210 3210 3450 4200 4400 4400 4200 4200 4200	ME AN CONCENT OF THE TOTAL OF T	DISCHANGE (TONS/DAY)  247 640 934 1250 657 325 572 572 574 576 2720 3350 2720 2770 2770 2770 2770 2770 1770 1470 1470 1470 1470 1470 1470 1	DISCHANGE (CFS)  3640  3840  3720  3760  3860  3860  3860  38760  3690  4200  4200  4040  4060  3960  3600  3600  3600  4200  4180	MEAN CONCENTRATION (MG/L)  49 51 39 43 39 43 39 60 39 60 102 126 83 50 47 46 46 46 473 50 58 67	OISCHAMGE (TONS/)AY)  449 526 432 396 400 413 402 365 334 394 621 907 1180 1420 614 545 515 492 474 489 816 567 661 771 953	DISCHARGE (CFS)  4180 4390 4390 4320 4340 4340 4370 4550 44670 4590 4590 4590 4590 4570 4360 4460 4460 4460 4460 4460 4460 446	MEAN_CONCENT   MEAN_C	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3520 3550 3100 3570 4210 3140 1760 1660 1630 1450 2400 4200 2340 1570 1200 1270 1200 935 891 971 991 1290 1790
1 2 3 4 5 5 7 7 7 9 3 1 1 1 1 2 1 4 1 5 1 4 1 5 1 6 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7	UISCHAPGE (CFS) 3270 3340 3340 3440 3290 3250 3310 3210 3210 3210 3210 3210 3210 321	MEAN CONCENT (MG/L)  24 711 104 136 74 116 66 64 65 64 65 64 65 64 65 65 65 65 65 65 65 65 65 65 65 65 65	DISCHANGE (TONS/DAY)  247 640 934 1256 657 32-572 574 554 2220 3356 2730 2236 2740 2240 2240 2240 1740 1540 1020 1140 1250 11561 1020 1020	D1SCHAMGE (CFS) 3640 3820 3760 3860 3860 3860 3820 3760 3760 3760 3790 4200 4200 4300 4080 4080 4080 4080 4080 4080 40	MEAN CONCENT AT 10 MG/L)  49 51 43 39 43 39 43 39 46 39 30 30 47 46 47 47 46 46 47 73 50 59 67	OISCHAMGE (TONS/)AY)  449 526 432 394 444 196 400 413 402 365 334 394 621 907 1180 1420 914 545 515 492 474 489 916 567 661 771	01SCMARGE (CFS) 4180 4380 4920 4820 4550 4400 4340 4340 4340 4350 4650 4260 4350 4400 4590 4650 4590 4650 4400 4590 4590 4590 4590 4590 4590 45	MEAN_CONCENT_PATION (MG/L)  89 112 530 454 684 295 301 301 263 101 112 117 117 117 118 189 127 78 81 81 81 81 81 81 81 81 81 81 81 81 81	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3500 3520 3150 3150 3160 3160 3160 3160 3160 3160 3160 316
1 2 3 4 5 5 7 9 9 11 11 2 12 2 12 2 2 4 4 5 2 6 6 7 8 2 9 0	UISCHAPGE (CFS) 3270 3340 3340 3340 3440 3290 7250 3310 3450 34510 34510 34510 4510 4510 4510 4510 4510 4700 4140 4040 4040 4040 4070 4070 40	MEAN CONCENT (MG/I.)  28 711 104 136 64 65 64 95 96 96 96 96 96 96 96 96 96 96 96 96 96	DISCHANGE (TONS/DAY)  247 640 934 1250 657 577 517 514 5220 3350 2740 2320 2740 2320 2740 2440 2440 1740 1540 1140 1150 1150 1150 1150 1150 11	D1SCHAMGE (CFS) 3A60 3B20 37720 37760 3B60 3B80 3B80 3R80 3R80 3R80 3R80 3R80 3R80 3R80 3R	MEAN_CONCENT_PATION (MG/L)  49 51 43 39 43 39 43 39 46 39 30 37 46 47 46 46 47 350 59 47 46	OISCHAMGE (TONS/DAY)  449 526 432 396 444  396 400 413 400 365 339 394 621 907 1180 1420 914 545 515 492 47,4 489 816 761 95,4 964	DISCHARGE (CFS)  4180 4390 4390 4820 4820 4850 4340 4340 4370 4570 4570 4570 4570 4570 4570 4570 45	MEAN_CONCENT_C	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3500 3550 3100 3570 3100 3170 4210 3140 1760 1660 1530 1450 2400 4200 2340 1570 1200 935 871 971 991 1290 1790 1330 935
1 2 3 4 5 5 7 7 9 3 10 11 2 3 14 5 15 14 7 11 12 0 2 12 2 2 5 2 6 7 2 8 9	UISCHAPGE (CFS) 3270 3340 3340 3440 3290 3250 3310 3210 3210 3210 3210 3210 3210 321	MEAN CONCENT OF THE TOTAL OF TH	DISCHANGE (TONS/DAY)  247 644 934 1256 657 325 572 572 574 575 574 2720 3356 2730 2730 2740 2740 2740 1740 1470 1470 1470 1470 1470 1470 1	DISCHANGE (CFS)  3640 3840 3720 3760 3860 3860 3860 3860 3760 3760 3760 3760 4200 4200 4180 4140 4200 4200 4200 4200 4200 4200 420	MEAN CONCENTRATION (MG/L)  49 51 39 43 39 43 39 60 39 60 102 126 83 50 47 46 46 46 473 50 58 67 78 77	OISCHAUGE (TONS)/DAY)  449 526 432 396 400 413 402 365 33+ 394 621 907 1180  1420 914 545 515 492 47 489 416 567 661 771 953 964	DISCHARGE (CFS)  4180 4390 4390 4320 4340 4340 4370 4550 4670 4590 4650 4350 4590 4570 4590 4570 4590 4570 4590 4570 4570 4360 4370 4570 4360 4460 4460 4460 4460 4460 4460 446	MEAN_CONCENT   MEAN_C	DISCHARGE (TUNS/DAY)  1000 1320 7040 5910 8400 3550 3100 3550 3100 3140 1760 1660 1670 1200 2340 1570 1200 935 971 991 1290 1330 935

## 09180500 COLORADO RIVER NEAR CISCO, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		APHIL			MAY			JUNE	
	MF4N DISCHARGE	ME AN CONCEN- TRATION	SEDIMENT DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	SEDIMENT DISCHA-GE	MEAN DISCHARGE	MEAN CONCEN- TRATION	SEDIMENT DISCHARGE
DAY	(CFS)	(MG/L)	(TONS/OAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
1	4440	59	695	8420	1100	25000	28000	809	61200
2	448N 444N	69 64	835 767	7120 6550	801 612	1540a 16800	24900 20800	666 684	44800 38400
4	4480	72	971	7420	1660	33300	21300	666	38300
5	4530	79	966	10300	3390	94300	50900	648	36600
5	4120 4160	49 49	545 550	14000 17300	4200 4400	159000 205000	22100 22200	588 569	35100 34100
Á	4300	70	P13	19100	3590	185000	23400	494	31200
) 10	4729 4840	250 350	3190 4570	18800 16800	2700 1800	137000 51600	23500 24300	977 1460	62000 95800
-	***		* * * * * * * * * * * * * * * * * * * *					•,	
11 12	5070 5400	500 1200	6840 19100	15600 17300	1660 2350	59901 110000	25900 26100	1690 957	118000 67400
13	6130	1450	24000	21100	2660	152000	24200	724	47300
14 15	5270 4800	155A 956	22]00 12400	23000	3359 2640	205000	23100	490 346	30600 20700
15	4×00	477	17400	24100	2540	17/000	22200		
16 17	4500 4440	474	4410 5080	22300 22400	1920 1420	116000 45900	21000 17200	522 500	29600 23200
13	4740	424	5430	23900	1990	123000	17200	498	23100
19	5120	423	5950	30200	1960	160000	17500	430	20300
20	5340	423	6100	32400	1600	140000	18200	654	32100
21 22	5120 4820	347 295	4800 3840	32500 32400	1330	117900	21900 25300	879 592	52000 40400
22	4820 4960	243	3190	32400 33200	7500 2400	306007 215000	25 10 0 24 30 0	462	30300
24	4690	251	3170	35000	1110	105000	20200	450	24500
25	4630	294	3700	34600	991	4/50n	21900	524	31000
26	5250	4510	65300	31700	738	6.3200	22200	482	28900
27 28	7550 10400	6000 6680	122000 188000	29400 28900	767 654	60900 51000	22700 25300	554 625	34000 42700
29	11600	5130	161000	28400	600	46000	25200	473	32200
30 31	10300	1150	87980	26700 27100	626 651	45100 47600	22500	450	27300
TOTAL	165040		768012	698010		3438509	675500		1233100
		JULY			AUGUST			SEPTEMBER	
		MEAN			MEAN			MEAN	
DAY	MF AN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHAPGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TEATION (MG/L)	SECTMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	15700	400	17000	4200	900	10200	3530	8130	77500
?	13500 11900	390 591	14200 19080	3980 3780	187 165	2010 1660	3880 4160	5300 1000	55500 11200
4	13500	504	22200	3690	151	1500	4180	400	4510
5	13400	376	13600	4180	611	6900	4120	1700	18900
6	11600	362	11300	4460	1530	18409	9690	14000	513000
7 8	11200 10700	777 1610	23500 46500	4400 4400	1160 1230	13809	14903 10800	23600 7500	949000 219000
ý	11900	2770	48300	4500	2000	24300	8340	2500	56300
10	10300	449	13600	4590	1000	12400	8110	1000	21900
11	10900 11500	770 1050	22700 32600	4260 3780	900	10400	7900	620 460	13200
11	13300	4/3	15200	3500	525 251	5369 2370	7780 8290	2600	9660 67500
14	11400	413	12700	3340	199	1790	9970	6950	187000
15	7280	206	4050	3230	173	1510	10500	5700	157000
16	6430 6060	254	4410	3160	147	1250	8829	2500	59500
17 14	5960 5960	270 223	4420 3490	3360 3500	129	1170 1270	7750 7030	930 490	17400 9300
19	5700	176	2710	3400	140	1290	6520	402	7190
20	5000	248	4930	3740	220	5550	6220	314	5270
21	7750	388	H120	3980	550	5910	5790	227	3540
22 23	5700	1000	11200 15400	5100 5340	1340	14500 24500	5360 5250	194 168	2810 2380
24	5700	3600	55400	5070	1120	15300	5290	163	2330
25	5700	1900	29200	4630	620	775.)	5210	142	2000
26	5400	380	5950	4200	570	6460	5210	122	1720
27 24	5970 5780	651 562	10500 8770	3800 3570	443 454	4550 4380	5270 5250	122	1740 1530
29	5290	472	6740	3480	312	2930	5140	92	1280
30 31	4400 4530	271 1490	359n 18200	3400 3530	171 5150	1570	5030	105	1430
		1470			יוכוכ	+910n			
TOTAL	271091		549380	123550		275371	205080		2480590
TOTAL	DISCHARGE FO SUSPENDED-SI	OR AFAB (CE	FS-DAYS) SCHARGE FOR YEA	R (TONS)					2943570 9241097

### 09180500 COLORADO RIVER NEAR CISCO, UTAH -- Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF AMALYSIS: B, BOTTOM MITHDRAMAL TUBE; C, CHEMICALLY DISPERSED; N, IN MATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

			.,														
		WATER								PART	ICLE S	SIZE					
		TEM-			SUSPENDED												METHOD
		PERA-		CONCEN-	SEDIMENT	PERCE	NT F	INER	THAN '	THE S	IZE (	IN MI	LLIMET	TERS)	INDI	CATED	OF
		TURE	DISCHARGE	TRATION	DISCHARGE												ANALY-
DATE	TIME	(°C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	.008	.016	.D31	.062	-125	• 250	.500	1.00	2.00	SIS
7. 1969	1225	13.0	5230	623	8800	44	56		79		93	97	100				VPWC
12. 1970	1315	.0	4140	176	1970		20				66	88	99	100			VPWC
19	1215	5.0	4500	194	2360						81	B6	100				VPWC
11	1330	14.0	15500								64	B5	97	10D			VPWC
		13.5	18500	256	12800	29					90	99	100				VPWC
15	1220	22.0	7120	206	3960	34	47				100						SPWC
24	1120	20.0	5970	7050							99	100					VPWC
		24.5	4120	794							100						SPWC
7	1830	17.5									95	97	99	100			VPMC
		18.0	9250	4620	11500D	36					92	96	100				VPWC
15	1315	17.0	10300	5260	1460D0	41	55				92	96	100				VPWC
	7, 1969 12, 1970 19 15 24 1	7, 1969 1225 12, 1970 1315 19	TEMPLE TE	TEM-PERA- TURE DISCHARGE  TIME (°C) (CFS)  7. 1969 1225 13.0 2230 12. 1970 1315 .0 4140 19	TEM- PERA- TURE (°C) DISCHARGE TRATION TURE (°C) CONCEN- TURE (°C) CONCEN- TURE (°C) CONCEN- TURE (°C) DISCHARGE TRATION (MG/L)  7. 1969 1225 13.0 5230 623 12. 1970 1315 .0 4140 176 11 1330 14.0 15500 171 15 1220 13.5 18500 256 15 1220 22.0 7120 206 24 1120 20.0 5970 7050 11 1835 24.5 4120 794 7 1830 17.5 14300 20100 8 1935 18.0 9250 4620	TEH-  PERA- TURE   PERA- TURE	TEM- PERA- TURE DISCHARGE TRATION DISCHARGE  ONCEN-SEDI MENT PERCE (CO) CONCEN-SEDI MENT PERCE (MG/L) (TONS/DAY) .002  7, 1969 1225 13.0 5230 623 8800 44 12, 1970 1315 .0 4140 176 1970 15 19 1215 5.0 4500 174 2360 40 11 1330 14.0 15500 1710 71600 16 15 1250 13.5 18500 256 12800 29  15 1220 22.0 7120 206 3960 34 12.1 120 20.0 5970 7050 114000 48 11 1835 24.5 4120 794 8830 56 7 1830 17.5 14300 20100 776000 39 8 1935 18.0 9250 4620 115000 36	TEM-PERA-TURE DISCHARGE TRATION DISCHARGE  DATE TIME (°C) C(SS) (MG/L) (TONS/DAY) .002 .004  7. 1969 1225 13.0 5230 623 8800 44 56 12. 1970 1315 .0 4140 176 1970 15 20 19 1230 14.0 15500 194 2360 40 51 11 1330 14.0 15500 191 2360 40 51 15 1250 13.5 18500 258 12800 29 35 15 1220 22.0 7120 206 3960 34 47 16 120 20,0 5970 7050 114000 48 67 11 1835 24.5 4120 794 8830 56 72 7 1830 17.5 14300 20100 776000 39 55 8 1935 18.0 9250 4620 115000 36 49	TEM- PERA- TURE DISCHARGE TRATION DISCHARGE  7, 1969 1225 13.0 5220 623 8880 44 56 12, 1970 1315 -0 4140 176 1970 15 20 11	TEM- PERA- TURE DISCHARGE TRATION DISCHARGE  7, 1969 1225 13.0 2530 623 8800 44 56 79 12, 1970 1315 .0 4140 176 1970 15 20 19 1300 14.0 15500 1716 1716 10 16 20 15 1250 13.5 18500 256 12800 29 35 15 1200 22.0 7120 206 3960 34 47 16 1200 20,0 5970 7050 114000 48 67 11 1835 24.5 4120 794 8830 56 72 18 1830 17.5 14300 20100 776000 39 55 18 1935 18.0 9250 4620 115000 36 49	TEH-	TEM- PERA- TURE DISCHARGE TRAITON DISCHARGE  DATE TIME (°C) (CFS) (MG/L) (TOMS/DAY) .002 .004 .008 .016 .031 .062  7, 1969 1225 13.0 2530 623 8800 44 56 79 93 12, 1970 1315 .0 4140 176 1970 15 20 61 11 1330 14.0 15500 174 2360 40 51 61 11 1330 14.0 15500 1710 71600 16 20 64 15 1250 13.5 18500 256 12800 29 35 90 15 120 22.0 7120 206 3960 34 47 10 24 1120 20,0 5970 7050 114000 48 67 99 11 1835 24.5 4120 794 8830 56 72 90 17 1830 17.5 14300 20100 776000 39 55 95 8 1935 18.0 9250 4620 115000 36 49 92	TEM- PERA- TURE DISCHARGE TRATION DISCHARGE TIME (°C)  015CHARGE TRATION DISCHARGE TIME (°C)  125 13.0  12. 1970 1315 .0  1400 176 1970 15 20 66 88 19 1215 5.0  1500 194 2360 40 51 66 88 19 1215 5.0  1500 194 2360 40 51 64 85 15 1250 13.5  1500 1500 256 12800 29 35 90  15 120 22.0  1710 71600 18 67 99  15 1210 20.0  1710 71600 18 67 99  16 1210 20.0  1710 71600 18 67 99  17 1810 17.5  1850 24.5  1860 34 67 99  10 1210 20.0  11 1855 24.5  12 1930 17.0  13 1930 18.0  14 1930 18.0  15 1930 18.0  15 1930 18.0  17 1810 18.0  1800 38 67 99  1800 38 67 99  1800 38 67 99  1800 1800 39 55 99  1800 1800 39 55 99  1800 1800 39 55 99  1800 1800 39 55 95  1800 1800 39 55 95  1800 1800 39 55 95  1800 1800 39 55 95  1800 1800 39 55 95  1800 1800 39 55 95  1800 1800 39 55 95  1800 1800 39 55 95  1800 1800 39 55 95  1800 38 49 92  1800 38 49 92  1800 38 49 92  1800 38 49 92  1800 38 49 93  1800 38	TEMPERATURE DISCHARGE TRAITON	TEM- PERA- TURE  DISCHARGE  TIME  TIME  (°C)  TIME  (°C)  TIME  (°C)  TIME  TI	TEM- PERA- TURE DISCHARGE TRATION DISCHARGE  TIME (°C) (CFS) (MG/L) (TONS/DAY) .002 .004 .008 .016 .D31 .062 .125 .250 .500 1.00  7, 1969 1225 13.0 5230 623 8800 44 56 79 93 97 100 12, 1970 1315 .0 4140 176 1970 15 20 66 88 99 100 19 1215 5.0 4500 194 2360 40 51 81 86 100 11 1330 14.0 15500 1710 71600 16 20 64 85 97 100 15 1250 13.5 18500 256 12800 29 35 90 99 100 15 1220 22.0 7120 206 3960 34 47 90 99 100 24 1120 20.0 5970 7050 114000 48 67 99 100 11 1835 24.5 4120 794 8830 56 72 99 99 100 17 1830 17.5 14300 20100 776000 39 55 99 99 100 18 1935 18.0 9250 4620 115000 36 49 99 99 100	TEM- PERA- TURE  DISCHARGE  TIME  TIME  (°C)  DISCHARGE  TRATION DISCHARGE TRATION DISCHARGE  TRATION DISCHARGE TRATION DISCHAR

#### GREEN RIVER BASIN

### 09188500 GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WYO.

LOCATION. -- Lat 43°01'00", long 110°07'20", in sec.8, T.35 N., R.111 W., Sublette County, at bridge on U.S. Highways 187 and 189, 100 ft downstream from gaging station, 3 miles upstream from Beaver Creek, and 12 miles north of Daniel.

DRAINAGE AREA. -- 468 sq mi (at gaging station).

PERIOD OF RECORD, --Chemical analyses: May 1962 to September 1964, October 1967 to September 1970. Water temperatures: May 1962 to September 1964, Sediment records: October 1968 to September 1968 (miscellaneous).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
23 NOV.	1410	155	5.6	20	80	19	3.5	1.0	156	0	159	.9
23 DEC.	1030	A87	7.2	350	101	25	3.9	1.2	162	0	204	5.7
03 JAN.	1020	08A	5.8	10	102	20	4.3	1.5	164	0	210	1.3
09 FEB.	1315	A83	7.8	50	98	22	4.0	•6	164	0	209	.9
11 MAR.	1535	A99	7.4	0	89	20	3.5	2.0	149	0	189	1.0
10 APR.	1000	A117	8.1	30	95	20	3.7	1.1	149	0	189	1.1
12 MAY	1445	A123	19	50	89	19	4.0	1.2	152	c	186	1.7
11 JUNE	0845	A400	5.8	100	56	12	3.1	1.5	126	0	91	2.0
09 JULY	1720	2420	3.5	70	22	5.5	1.0	.6	72	0	22	•4
16 AUG.	0920	1020	2.8	90	23	3.8	1.5	.9	61	0	25	1.0
06 SEP.	1445	532	2.4	70	29	3.0	2.0	.7	61	0	40	1.5
10	1945	430	2.0	350	32	4.5	2.0	.5	57	0	47	2.1

A DAILY MEAN DISCHARGE.

## 09188500 GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WYO .-- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

OCT.         23         .2         .0         10         346         .47         144         278         150         .1         510          7.5           HOW.         .2         .0         0         429         .58         100         354         221         .1         625          0.0           DEC.         .5         .0         0         429         .58         100         354         221         .1         625          0.0           DEC.         .3         .1         0         426         .57         91.2         338         203         .1           0.0           JAN.         .3         .1         0         426         .57         91.2         338         203         .1           0.0           JESE.         .4         .2         30         424         .60         98.6         335         200         .1         635          0.0           FEB.         .1         .0         20         386         .52         103         304         182         .1           0.0	DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
NOV. 235 .0 0 429 .58 100 354 221 .1 625 0.0 DEC. 033 .1 0 426 .57 91.2 338 203 .1 0.0 JAN. 094 .2 30 424 .60 98.6 335 200 .1 635 0.0 FEB. 118 .0 20 386 .52 103 304 182 .1 0.0 MAR. 108 .0 10 392 .53 124 319 197 .1 580 0.0 APR. 128 .1 0 396 .52 127 300 175 .1 1.0 MAY. 128 .1 0 396 .52 127 300 175 .1 1.0 MAY. 134 .5 10 234 .35 281 189 86 .1 1.0 JUNE4 .5 10 234 .35 281 189 86 .1 1.0 JUNE5 JULY5 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1													
23		• 2	•0	10	346	.47	144	278	150	-1	510		7.5
03 3 .1 0 426 .57 91.2 338 203 .1 0.0 JAN. 09 4 .2 30 424 .60 98.6 335 200 .1 635 0.0 FEB. 11 8 .0 20 386 .52 103 304 182 .1 0.0 MAR. 10 8 .0 10 392 .53 124 319 197 .1 580 0.0 APR. 12 8 .1 0 396 .52 127 300 175 .1 1.0 MAY 11 4 .5 10 234 .35 281 189 86 .1 1.0 JUNE 09 2 .1 10 90 .14 666 78 19 .0 8.5 JULY 16 2 .2 0 88 .12 237 74 24 .1 142 7.3 13.0 AUG. 06 1 .1 40 109 .15 158 86 36 .1 195 8.1 SEP.	23	.5	.0	0	429	.58	100	354	221	•1	625		0.0
JAN. 09		. 2	. 1		424	67	91 2	220	202				0.0
FEB. 11		• • •	••	٠	420	• > 1	71.02	330	203	••			0.0
11		.4	•2	30	424	.60	98.6	335	200	•1	635		0.0
MAR. 10		.8	.0	20	386	.52	103	304	182	.1			0.0
APR. 128 .1 0 396 .52 127 300 175 .1 1.0  MAY 114 .5 10 234 .35 281 189 86 .1 1.0  JUNE 092 .1 1D 90 .14 666 78 19 .0 8.5  JULY 162 .2 0 88 .12 237 74 24 .1 142 7.3 13.0  AUG. 061 .1 40 109 .15 158 86 36 .1 195 8.1  SEP.								• • •					
12 8		.8	.0	10	392	.53	124	319	197	•1	580		0.0
MAY 114 .5 10 234 .35 281 189 86 .1 1.0 JUNE 092 .1 1D 90 .14 666 78 19 .0 8.5 JULY 162 .2 0 88 .12 237 74 24 .1 142 7.3 13.0 AUG. 061 .1 40 109 .15 158 86 36 .1 195 8.1 SEP.		. 8	. 1	0	396	- 52	127	300	175	-1			1.0
11		••	••	•	370	• 32	121	300	.,,	• • •			
092 .1 1D 90 .14 666 78 19 .0 8.5 ULY 16	11	.4	•5	10	234	•35	281	189	86	.1			1.0
JULY 162 .2 0 88 .12 237 74 24 .1 142 7.3 13.0 AUG. 061 .1 40 109 .15 158 86 36 .1 195 8.1 SEP.				10				70	10	•			
l62 .2 0 88 .12 237 74 24 .1 142 7.3 13.0 AUG. 061 .1 40 109 .15 158 86 36 .1 195 8.1 SEP.		•2	• • •	10	90	• 14	000	76	19	•0			0.9
061 .1 40 109 .15 158 86 36 .1 195 8.1 SEP.	16	•2	•2	0	88	.12	237	74	24	-1	142	7.3	13.0
SEP.		. 1	. 1	40	100	15	150	94	34	. 1	106	0.1	
		• • •	••	40	107	•17	1.70		30	••	177	•••	
		•0	-1	20	119	.17	142	98	51	-1	216	8.2	13.0

### FIELD DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	OIS- SOLVEO CXYGEN (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
OCT.						
23	1410	155	10.2	8.5	510	7.5
NOV.						
23 DEC.	1030	A87	10.5	8.3		0.0
03	1020	084	10.2	8.3	610	0.0
JAN.				0.0	•••	***
09	1315	A83	7.5	8.4		0.0
FEB.						
11	1535	A99	8.9	8.2	575	0.0
MAR. 10	1000					
APR.	1000	A117	8.1	8.3		0.0
12	1450	A123	9.6	8.3	585	1.0
MAY						
11	0845	A400	10.8	8.3	393	1.0
JUNE						
09	1720	2420	8.9	8.4	147	8.5

A DAILY MEAN DISCHARGE.

#### 09192600 GREEN RIVER NEAR BIG PINEY, WYO.

LOCATION.--Lat 42°34'14", long 109°56'58", in NEINEI sec.21, T.30 N., R.110 W., Sublette County, at bridge on State Secondary Highway 1801, 1.9 miles upstream from New Fork River, 8.4 miles northeast of Big Piney, and 16.2 miles southwest of Boulder.

DRAINAGE AREA. -- 1,260 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: October 1967 to September 1970. Sediment records: October 1968 to September 1969 (miscellaneous).

OATE	TI ME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOL VED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR~ BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 04	09 30	158	4.9	0	62	14	9.3	.9	139	0	110	3.2
20	1430	178	8.0	100	93	20	8.8	1.4	229	0	132	11
JAN. 14 FEB.	1600	80	6.8	100	76	32	5.4	1.2	189	0	152	16
07	1410	134	7.0	150	85	18	4.9	1.2	180	0	142	11
03 APR.	1315	153	6.6	330	83	20	5.9	1.4	170	9	142	7.3
12 MAY	1350	588	5.1	0	65	16	8.3	1.9	175	0	96	7.3
O6	0940	984	9.9	160	60	16	7.5	3.0	194	0	65	5.0
06 JULY	1310	2000	6.8	180	42	9.4	5 <b>.5</b>	1.3	143	0	35	1 -1
12 AUG.	1100	1250	7.4	110	43	8.6	11	1.2	153	0	39	5.7
08 SEP.	0930	512	3. 3	60	39	6.8	7-4	.9	104	6	43	3.6
03	1255	320	2.8	50	42	8.9	7.8	1.1	113	0	62	1.8
				DIS-								
DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NI TRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AO- Sorp- Tion Ratio	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
DCT. 04	SOL VED FLUO- RIDE (F)	( NO3 )	SOLVED BORON (B)	SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS ITONS PER	SOLVED SOLIDS (TONS PER	NESS (CA, MG)	CAR- BONATE HARD- NESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO-		ATURE
DCT. 04 NOV. 20	SOLVED FLUO- RIDE (F) (MG/L)	(MG/L)	SOLVED BORON (B) (UG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURÉ (DEG C)
DCT. 04 NOV. 20 JAN.	SOL VED FLUO- RIDE (F) (MG/L)	(NO3) (MG/L)	SOLVED BORON (B) (UG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MIOS)	(UNITS)	ATURE (DEG C)
DCT. 04 NOV. 20 JAN. 14 FEB.	SOL VED FLUO- RIDE (F) (MG/L)	(MG/L)	SOLVED BORON (B) (UG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 273	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA, MG) (MG/L) 211 315	CAR- BONATE HARD- NESS (MG/L) 97	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MIGS) 445	(UNITS) 7.8 B.1	ATURE (DEG C) 4.0
DCT. 04 NOV. 20 JAN. 14 FEB. 07 MAR.	SOLVED FLUO- RIDE (F) (MG/L)	(MG/L) -2 -3	S OL VED BOR ON (B) (UG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 273 388 383	SOLVED SOLIDS (TODS PER AC-FT) .3B .54	SOLVED SOLIDS (TONS PER DAY) 120 191 82-1	NESS (CA, MG) (MG/L) 211 315 320	CAR- BONATE HARD- NESS (MG/L) 97 127	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 445 611	7.8 B.1 8.0	ATURE (DEG C) 4.0 0.0
DCT. 04 NOV. 20 JAN. 14 FEB. 07	SOL VED FLUO- RIDE (F) (MG/L)	.2 .3 .0	S OL VED BOR ON (B) (UG/L) 10 0	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 273 388 383 358	SOLVED SOLIDS (TONS PER AC-FT) -3B -54 -52 -48	SOLVED SOLIDS (TONS PER DAY) 120 191 82-1	NESS (CA, MG) (MG/L) 211 315 320 288	CAR- BONATE HARD- NESS (MG/L) 97 127 165	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 445 611 574	7.8 8.1 8.0 8.0	ATURE (DEG C)  4-0  0-0  0-0
DCT. 04 NOV. 20 JAN. 14 FEB. 07 MAR. 03 APR.	SOL VED FLUO- RIDE (F) (MG/L)	.2 .3 .0 .2	S OL VED 80R ON (B) (UG/L) 10 0 20	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 273 388 383 358	SOL VED SOLIDS (TONS PER AC-FT) -3B -54 -52 -48	SOLVED SOLIDS (TDNS PER DAY) 120 191 82-1 128	NESS (CA, MG) (MG/L) 211 315 320 288 292	CAR- BONATE HARD- NESS (MG/L) 97 127 165 140 138 85	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 445 611 574 542 544 480 428	(UNITS)  7.8  8.1  8.0  8.0  8.4  7.5	4.0 0.0 0.0 0.0 0.0 3.0
DCT. 04 NOV. 20 JAN. 14 FEB. 07 MAR. 03 12 MAY C6 JUNE 06 JULY	SOL VED FLUO- FLUO- RIDE (F) (MG/L) .3 .4 .4 .4 .4 .4	(MG/L)  .2  .3  .0  .2  .0  .0  .0	SOL VED BORON (B) (UG/L)  10  20  10  30  20	SOLIDS (SUM OF CONSTITUENTS) (MG/L) 273 388 383 358 359 286 259	SOL (VED SOL (DS SOL (DS SOL (DS SOL (DS FET) ) 38	SOL VED SOL IDS (TONS PER DAY)  120 191 82.1 128 150 470 723 929	NESS (CA, MG) (MG/L)  211 315 320 288 292 229 216 144	CAR- 80NATE ARD- NESS (MG/L) 97 127 165 140 138 85 57	.3 .2 .1 .1 .2 .2 .2	COND- UCTANCE (MICRO- MHOS) 445 611 574 542 544 480 428 295	7.8 8.1 8.0 8.0 8.4 7.5 7.5	ATURE (DEG C)  4.0  0.0  0.0  0.0  3.0  5.5
DCT. 04 NOV. 20 JAN. 14 FEB. 07 MAR. 03 APR. 12 NAY C6 JULY 12 AUG.	SOL VED FLUO- FLUO- RIDE (F) (MG/L) .3 .4 .4 .4 .4 .4 .4 .2	(NG3) (MG7L) -2 -3 -0 -2 -0 -0 -0	SOL VED BORON (B) (UG/L)  10  20  0  10  30  20  0	SOLIDS (SUM OF CONSTITUENTS) (MG/L) 273 388 383 358 359 286 259 172	SOL VED SOL IDS (TONS PER AC-FT) .38 .54 .52 .48 .49 .40 .37 .23	SOL VED SOL IDS (TONS PER DAY)  120 191 82.1 128 150 470 723 929 655	NESS (CA, MG) (MG/L) 211 315 320 288 292 229 216 144	CAR- BONATE HARD- NESS (MG/L) 97 127 165 140 138 85 57 27	.3 .2 .1 .1 .2 .2 .2 .2	FILE COND- COND- UCTANCE (MICRO- MHOS)  445 611 574 542 544 480 428 295 316	7.8 8.1 8.0 8.0 8.4 7.5 7.5	ATURE (DEG C)  4.0  0.0  0.0  0.0  3.0  5.5  15.0
DCT. 04 NOV. 20 JAN. 14 FEB. 07 MAR. 03 APR. 12 MAY C6 JUNE 06 JUNE 06 JUNE	SOL VED FLUO- FLUO- RIDE (F) (MG/L) .3 .4 .4 .4 .4 .4	(MG/L)  .2  .3  .0  .2  .0  .0  .0	SOL VED BORON (B) (UG/L)  10  20  10  30  20	SOLIDS (SUM OF CONSTITUENTS) (MG/L) 273 388 383 358 359 286 259	SOL (VED SOL (DS SOL (DS SOL (DS SOL (DS FET) ) 38	SOL VED SOL IDS (TONS PER DAY)  120 191 82.1 128 150 470 723 929	NESS (CA, MG) (MG/L)  211 315 320 288 292 229 216 144	CAR- 80NATE ARD- NESS (MG/L) 97 127 165 140 138 85 57	.3 .2 .1 .1 .2 .2 .2	COND- UCTANCE (MICRO- MHOS) 445 611 574 542 544 480 428 295	7.8 8.1 8.0 8.0 8.4 7.5 7.5	ATURE (DEG C)  4.0  0.0  0.0  0.0  3.0  5.5

### 09201000 NEW FORK RIVER NEAR BOULDER, WYO.

LOCATION (revised).--Lat 42°45'01", long 109°43'41", in NWiNEinWi sec.16, T.32 N., R.108 W., Sublette County, at bridge on old U.S. Highway 187, 70 ft upstream from former gaging station, 770 ft upstream from Boulder Creek, and 0.5 mile northwest of Boulder.

DRAINAGE AREA. -- 552 sq mi.

PERIOD OF RECORD, --Chemical analyses: October 1967 to September 1970. Sediment records: October 1968 to September 1969 (miscellaneous).

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	TDTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
DEC. 03	0840	98	12	120	41	6.0	8.3	1.4	159	0	13	6.1
JAN.												
09 FEB.	1640	81	10	100	42	8.8	9.3	1.9	161	0	8.2	18
08	1110	104	8.3	190	35	6.3	7.4	1.2	134	0	7.4	6.1
MAR. 02	1530	122	7.8	90	37	9.4	7.4	1.4	153	0	12	6.1
APR. 07	09 30	162	4.8	0	34	7.2	5.9	1.4	131	0	8.2	11
MAY 05	1400	214	8.8	200	36	8.8	9.8	3.0	152	0	14	3.2
JUNE 07	1345	1950	4.0	140	6.0	1.2	2.0	.9	27	0	4.0	.3
JULY 08	1250	633	8.0	170	25	-1	4.9	1.2	76	0	2.5	5.1
AUG. 08 SEP.	1315	231	7.6	60	31	3.4	6.9	1.6	104	6	4-1	2.6
03	1620	134	7.7	120	36	7.8	9.2	2.0	159	0	5.8	2.1
DATE	DIS- SOL VED FLUO- RI OE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SDLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARO- NESS (MG/L)	SODIUM AO- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
DEC.	SOL VED FLUO- RIDE (F) (MG/L)	(NO3) (MG/L)	SOL VED BORON (B)	SOLVED SDLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	SOLVED SOLIDS (TONS PER	NESS (CA,MG)	CAR- BONATE HARD- NESS	AO- SORP- TION	FIC COND- UCTANCE IMICRO-		ATURE
DEC. 03 JAN.	SOL VED FLUO- RI OE (F) (MG/L)	(NO3) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SDLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NE SS (CA, MG) (MG/L)	CAR- BONATE HARO- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
DEC. 03 JAN. 09 FEB.	SOL VED FLUO- RIDE (F) (MG/L)	(NO3) (MG/L)	SOL VED BORON (B) (UG/L)	SOLVED SDLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY) 42.9 35.0	NESS (CA, MG) (MG/L) 128	CAR- BONATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.0 7.7	ATURE (DEG C)
DEC. 03 JAN. 09 FEB.	SOL VED FLUO- RI OE (F) (MG/L)	(NO3) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SDLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NE SS (CA, MG) (MG/L)	CAR- BONATE HARO- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
DEC. 03 JAN. 09 FEB. 08 MAR.	SOL VED FLUO- R(DE (F) (MG/L)	(NO3) (MG/L)	SOL VED BORON (B) (UG/L)	SOLVED SDLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY) 42.9 35.0	NESS (CA, MG) (MG/L) 128	CAR- BONATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.0 7.7	ATURE (DEG C)
DEC. 03 JAN. 09 FEB. 08 MAR. 02 APR.	SOL VED FLUO- RI OE (F) (MG/L) -2 -3	(NO3) (MG/L) .3 .3	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 166 178	SOLVED SOLIDS (TONS PER AC-FT) -22 -22	SOLVED SOLIDS (TONS PER DAY) 42.9 35.0	NESS (CA,MG) (MG/L) 128 140	CAR- BONATE HARO- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND— UCTANCE (MICRO— MHOS) 315 275 238	(UNITS) 8.0 7.7 7.8	0.0 0.0 0.0
DEC. 03 JAN. 09 FEB. 08 MAR. 02 APR. 07 MAY	SOL VED FLUO- RI DE (F) (MG/L) •2 •3 •5	(NO3) (MG/L) .3 .3	SOLVED BORON (B) (UG/L) 0 0	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 166 178 139	SOLVED SOLIDS (TONS PER AC-FT) .22 .22 .18	SOLVED SOLIDS (TONS PER DAY) 42.9 35.0 37.6 48.8	NESS (CA,MG) (MG/L) 128 140 113	CAR- BONATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND— UCTANCE (MICRO— MHOS) 315 275 238	8.0 7.7 7.8 8.1	0.0 0.0 0.0 0.0
DEC. 03 JAN. 09 FEB. 02 MAR. 02 APR. 05 JUNE 07	SOL VED FLUO- RI DE (F) (MG/L) -2 -3 -5 -2	(NO3) (NG/L) .3 .3 .3	SOL VED BORON (B) (UG/L) 0 0	SOL VED SDL1DS (SUM OF CONSTI- TUENTS) (MG/L) 166 178 139 156	SOLVED SOLIDS (TONS PER AC-FT) -22 -22 -18 -20 -19	SOLVED SOLIDS (TONS PER DAY) 42.9 35.0 37.6 48.8	NESS (CA,MG) (MG/L)  128  140  113  131	CAR- BONATE HARO- NESS (MG/L) 0 8 3	AO- SORP- TION RATIO	FIC COND— UCTANCE (MICRO— MHOS) 315 275 238 253 246	8.0 7.7 7.8 8.1 7.4	0.0 0.0 0.0 0.0 0.0
DEC. 03 JAN. 09 FEB. 08 MAR. 02 APR. 07 JUNE 07 JUNE	SOL VED FLUO- RI DE (F) (MG/L) -2 -3 -5 -2	(NO3) (NG/L) .3 .3 .3 .0 .0	SQL VED B GRON (B) (UG/L) 0 0 0	SOLVED SDL1DS (SUM OF CONSTI- TUENTS) (MG/L) 166 178 139 156 137	SOLVED SOLIDS (TONS PER AC-FT) -22 -22 -18 -20 -19 -22	SOLVED SOLIDS (TONS PER DAY) 42.9 35.0 37.6 48.8 60.4	NESS (CA,MG) (MG/L)  128  140  113  131  114	CAR- BONATE HARO- NESS (MG/L) 0 8 3 5	.3 .3 .3 .3	FIC COND— UCTANCE (MICRO— MHOS) 315 275 238 253 246	8.0 7.7 7.8 8.1 7.4	0.0 0.0 0.0 0.0 0.0 11.0
DEC. 03 JAN. 09 FEB. 08 MAR. 07 APR. 07 MAY 05 JUNE 0T.	SOL VED FLUO- RLDE (F) (MG/L) .2 .3 .5 .2 .3	(NO3) (MG/L) .3 .3 .3 .0 .0	SOL VED BORON (B) (UG/L) 0 0 0 10 200	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 166 178 139 156 137 160	SOLVED SOLIDS (TONS PER AC-FT) .22 .22 .18 .20 .19 .22 .06	SOLVED SOLIDS (TONS PER DAY) 42.9 35.0 37.6 48.8 60.4 94.8	NESS (CA,MG) (MG/L) 128 140 113 131 114 125	CAR-BONATE HARO-NESS (MG/L)  0 8 3 5 7 0	.3 .3 .3 .3 .3	FIC COND- UCTANCE (MICRO- MHOS) 315 275 238 253 246 265	(UNITS)  8-0  7-7  7-8  8-1  7-4  7-3  6-7	0.0 0.0 0.0 0.0 0.0 4.5 11.0

### 09205000 NEW FORK RIVER NEAR BIG PINEY, WYO.

LOCATION. -- Lat 42°34'02", long 109°55'46", in SENERNET sec.22, T.30 N., R.110 W., Sublette County, at gaging station at old highway bridge, 2 miles upstream from mouth and 9.5 miles northeast of Big Piney.

DRAINAGE AREA. -- 1,230 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: October 1965 to September 1969 (daily), October 1969 to September 1970 (monthly).

Water temperatures: October 1965 to September 1969.
Sediment records: October 1968 to September 1969 (miscellaneous).

EXTREMES. --Period of record:
Dissolved solids (1965-69): Maximum, 164 mg/l Nov. 1-30, 1966; minimum, 37 mg/l May 8-31, 1969.
Hardness (1965-69): Maximum, 106 mg/l Feb. 1-10, 1968; minimum, 24 mg/l May 24-31, 1967.
Specific conductance (1965-69): Maximum daily, 389 micromhos Mar. 7, 1967; minimum daily, 52 micromhos May 28, 1967.
Water temperatures (1965-69): Maximum, 23.0°C Aug. 4, 1966; minimum, freezing point on many days during winter periods.

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SID2) (MG/L)	TDTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BDNATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 23	1200	372	11	110	48	14	21	1.4	113	0	118	4.4
NDV. 23	0900	A298	11	80	35	5.2	8.8	1.4	135	D	3.3	9.7
DEC. 02	1600	A243	8.9	70	30	8.5	11	2.0	132	D	24	2.8
JAN. 18	1000	A188	11	60	28	6.6	10	2.0	127	o	16	2.2
FEB. 07	1625	A196	10	10	28	6.1	9.5	1.4	118	0	15	2.6
MAR. 10 APR.	1105	A197	8.9	100	27	6-1	10	1.4	119	D	17	2.6
12 MAY	1320	341	9.0	190	31	7.5	17	3.7	133	0	31	5.4
10 JUNE	1700	240	9.3	160	29	6.3	12	1.7	132	0	17	3.1
06	1330 1545	3640 3790	4.2	120 70	6.0 7.0	1.4	2.5 2.6	.8 .9	26 29	0	6.0 5.8	.8 .8
JULY 16	0800	860	10	140	27	3.5	7.4	1.4	104	0	5.8	4.6
AUG. 08	1100	445	7.5	50	33	•9	8.8	1.6	101	6	8.2	4.1
SEP. 03	1420	317	7.2	520	29	4.4	10	1.9	119	3	10	2.8
DATE	DIS- SOLVED FLUG- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM DF CDNSTI- TUENTS) (MG/L)	DIS- SDLVED SOLIDS (TDNS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SDRP- TION RATIO	SPEC1- FIC CDND- UCTANCE (MICRD- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.	SOLVED FLUO- RIDE (F)	(NO3) (MG/L)	SOLVED BDRON (B)	SOLVED SOLIDS (SUM DF CDNSTI- TUENTS)	SDLVED SOLIDS (TDNS PER	SDLVED SOLIDS (TONS PER	NESS (CA,MG)	CAR- BONATE HARD- NESS	AD- SDRP- TION	FIC CDND- UCTANCE (MICRD-		ATURE
	SOLVED FLUG- RIDE (F) (MG/L)	(NO3)	SOLVED BDRON (B) (UG/L)	SOLVED SOLIDS (SUM DF CDNSTI- TUENTS) (MG/L)	SDLVED SQLIDS (TDNS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SDRP- TION RATIO	FIC CDND- UCTANCE (MICRD- MHOS)	(UNITS)	ATURE (DEG C)
OCT. 23 NOV. 23 DEC. 02	SOLVED FLUG- RIDE (F) (MG/L)	(NG3) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (SUM DF CDNSTI- TUENTS) (MG/L)	SDLVED SOLIDS (TDNS PER AC-FT)	SDLVED SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SDRP- TION RATIO	FIC CDND- UCTANCE (MICRD- MHOS)	(UNITS)	ATURE (DEG C)
23 NOV. 23 DEC. 02 JAN. 18	SOLVED FLUG- RIDE (F) (MG/L)	(NO3) (MG/L) -1	SOLVED BORON (B) (UG/L) 30	SOLVED SOLIDS (SUM DF CDNSTI- TUENTS) (MG/L) 274	SDLVED SOLIDS (TDNS PER AC-FT)	SDLVED SOLIDS (TONS PER DAY) 281	NESS (CA,MG) (MG/L) 177	CAR- BONATE HARD- NESS (MG/L)	AD- SDRP- TION RATIO	FIC CDND- UCTANCE (MICRD- MHOS)	(UNITS) 	ATURE (DEG C) 6.5
OCT. 23 NOV. 23 DEC. O2 JAN. 18 FEB.	SOLVED FLUG- RIDE (F) (MG/L)	(NO3) (MG/L) .1 .2	SOLVED BDRON (B) (UG/L) 30 40	SOLVED SOLIDS (SUM DF CDNSTI- TUENTS) (MG/L) 274 141 152	SDLVED SOLIDS (TDNS PER AC-FT) .38 .21	SDLVED SOLIDS (TONS PER DAY) 281 122 99-7	NESS (CA,MG) (MG/L) 177 110	CAR- BOMATE HARD- NESS (MG/L) 84	AD- SDRP- TION RATIO	FIC CDND- UCTANCE (MICRD- MHOS)	(UNITS)	ATURE (DEG C) 6.5 0.5
DCT. 23 NGV. 23 DEC. 02 JAN. 18 FEB. 07	SOLVED FLUG- RIDE (F) (MG/L)	(NO3) (MG/L) -1 -2 -1	SOLVED BORON (B) (UG/L) 30 40 10	SOLVED SOLIDS (SUM DF CDNSTI- TUENTS) (MG/L) 274 141 152	SDLVED SQLIDS (TDNS PER AC-FT) .38 .21 .21	SDLVED SOLIDS (TODS PER DAY) 281 122 99.7 72.1	NESS (CA,MG) (MG/L) 177 110 110	CAR- BUMATE HARD- NESS (MG/L) 84 0	AD- SDRP- TION RATIO	FIC CDND— UCTANCE (MICRD— MHOS) 424 ——	(UNITS)	6.5 0.5 0.5
OCT. 23 NOV. 23 DEC. 02 JAN. 18 FEB. 07 MAR. 10 APR.	SOLVED FLUG- RIDE (F) (MG/L) .3 .2 .2	(NO3) (MG/L) -1 -2 -1 -6	SOLVED BORON (B) (UG/L) 30 40 10 10	SOLVED SOLIDS (SUM DF CONSTI- TUENTS) (MG/L) 274 141 152 139	SDLVED SQLIDS (TDNS PER AC-FT) -38 -21 -21 -19	SDLVED SOLIDS (TONS PER DAY) 281 122 99.7 72.1 74.1	NESS (CA, MG) (MG/L) 177 110 110 97	CAR- BUNATE HARD- NESS (MG/L) 84 0 2	AD- SDRP- TION RATIO	FIC CDND- UCTANCE (MICRO- MHOS) 424 		ATURE (DEG C)  6.5  0.5  0.5  0.0
OCT. 23 NGV. 23 DEC. 02 JAN. 18 FEB. 07 MAR. 10 APR. 12 MAY	SOLVED FLUG- RIDE (F) (MG/L) .3 .2 .2 .2	(NO3) (MG/L) .1 .2 .1 .6	SOLVED BORON (B) (UG/L) 30 40 10 20	SOLVED SOLIDS (SUM DF CDMSTI- TUENTS) (MG/L) 274 141 152 139 131	SDLVED SOLIDS (TDNS PER AC-FT) .38 .21 .21 .19 .19	SOLVED SOLIDS (TONS PER DAY) 281 122 99.7 72.1 74.1 64.9	NESS (CA, MG) (MG/L) 177 110 110 97 95	CAR- BUNATE HARD- NESS (MG/L) 84 0 2	AD- SDRP- TION RATIO	FIC CDND- UCTANCE (MICRO- MHOS) 424 	   	6.5 0.5 0.5 0.0 0.5
OCT. 23 NGV. 23 DEC. 02 JAN. 18 FEB. 07 HAR. 12 MAY 10 JUNE 06	SOLVED FLUO- FLUO- RIDE (F) (MG/L) .3 .2 .2 .2 .2	(NO3) (MG/L) -1 -2 -1 -6 -1 -0	SOLVED BDRON (B) (UG/L) 30 40 10 10 20	SOLVED SOLIDS (SUM DF CDMSTI- TUENTS) (MG/L) 274 141 152 139 131 131	SDLVED SOLIDS (TDNS PER AC-FT) .38 .21 .21 .19 .19 .17	SDLVED SDLIDS (TONS PER DAY)  281  122  99.7  72.1  74.1  64.9	NESS (CA, MG) (MG/L) 177 110 110 97 95 92	CAR- BONATE HARD- NESS (MG/L) 84 0 2 0 0	AD- SDRP- TION RATIO -7 -4 -5 -4 -5	FIC CDND- UCTANCE (MICRD- MHOS)  424		ATURE (DEG C) 6.5 0.5 0.5 0.0 0.5 4.5
OCT. 23 NOY. 23 DEC. 02 JAN. 18 FEB. 07 MAR. 10 APR. 12 MAY 10 JUNE 06 09 JULY	SOLVED FLUD- FLUD- FLUD- (F) (MG/L) .3 .2 .2 .2 .0 .2 .3	(NG3) (MG7L) -1 -2 -1 -6 -1 -0 -1	SOLVED BROWN (B) (UG/L) 30 40 10 10 20 10 20 110 110 110 110 110 110	SOLVED SOLLIDS (SUM DE CONSTIL TUENTS) (MG/L)  274  141  152  139  131  170  144  35	SDLVED SOLIDS (TONS PER AC-FT)	SDLVED SOLIDS (TONS PER DAY)  281  122  99.7  72.1  74.1  64.9  153  101  314	NESS (CA.MG) (MG/L)  177  110  110  97  95  92  108  98  21	CAR- BONATE HARD- NESS (MG/L) 84 0 2 0 0 0	AD- SORP- TION RATIO  .7 .4 .5 .4 .5 .7 .5	FIC CDMD- UCTANCE (MICRD- MHOS) 424		ATURE (DEG C)  6.5  0.5  0.0  0.5  0.0  4.5  8.0  13.0
OCT. 23 NOV. 23 DEC. 02 JAN. 18 FEB. 07 MAR. 10 APR. 12 MAY 10 JUNE 06 09 JULY	SOLVED FLUD- FLUD- FLUD- (F) (MG/L) .3 .2 .2 .2 .0 .2 .3 .2	(NO3) (MG/L) .1 .2 .1 .6 .1 .0 .1	SOLVED BORON (B) (UG/L) 30 40 10 10 20 10 20 110 20 120 20 120 20 20 20 20 20 20 20 20 20 20 20 20 2	SOLVED SOLLIDS (SUM DF CDNSTI-T VUENTS) (MG/L)  274  141  152  139  131  170  144  35  37	SDLVED SOLLIDS (TONS PER AC-FT) .38 .21 .19 .19 .17 .23 .21 .04 .07	SDLVED SOLIDS (TONS PER DAY)  281  122  99.7  72.1  74.1  64.9  153  101  314  532	NESS (CA.MG) (MG/L)  177  110  110  97  95  92  108  98  21  24	CAR-BONATE HARD-NESS (MG/L) 844 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AD- SORP- TION RATIO -7 .4 .5 .4 .5 .7 .5	FIC CDMD- UCTANCE (MICRO- MHCS) 424	(UNITS)	ATURE (DEG C)  6.5  0.5  0.0  0.5  0.0  4.5  8.0  13.0  11.0

A DAILY MEAN DISCHARGE.

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## 09205000 NEW FORK RIVER NEAR BIG PINEY, WYO, -- Continued

### FIELD DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	DIS- SCLVED OXYGEN (MG/L)	PH (UN[TS)	SPECI- FIC COND- UCTANCE (MICRD- MHOS)	TEMPER- ATURE (DEG C)
DCT.						
23	1200	372	10.3	8.6		6.5
NOV. 23	0900	A298	10.4	8.2	204	D.5
DEC.	0700	AE 70				
02	1600	A243	10.6	8.3	215	D•5
JAN.					245	D.0
18	1000	A188	8.1	8.2	243	0.0
FEB.	1625	A196	10.5	8.3	223	D•5
MAR.	1027	A270	20.72			
10	1115	A197	10.1	8.0	241	D•D
APR.					276	4.5
12	1315	341	10.3	8.5	210	***
MAY 10	1700	240	9.8	8.6	246	8.D
JUNE	1700	2.0	,			
09	1545	3790	8.2	8.3	58	11.0

A DAILY MEAN DISCHARGE.

#### 09207700 DRY PINEY CREEK NEAR BIG PINEY, WYO.

LOCATION. -- Lat 42°23'25", long 110°15'09", in NW NE sec. 27, T. 28 N., R. 113 W., Sublette County, at gaging station 8.3 miles upstream from mouth and 16.3 miles southwest of Big Piney.

DRAINAGE AREA. -- 67 sq mi, approximately.

PERIOD OF RECORD. -- Water temperatures: April 1966 to September 1970. Sediment records: April 1966 to September 1970.

EXTREMES. -- 1969-70:

CEMES. --1959-70: Water temperatures: Maximum, 26.0°C July 2, 4; minimum, freezing point on several days during October to May. Sediment concentrations: Maximum daily, 2,780 mg/l Sept. 6; minimum daily, no flow for many days during November to April and August.

Sediment discharge: Maximum daily, 2,780 mg/l Sept. 6; minimum daily, 10 frow for many days during Southing Movember to June, August to September.

Maker temperatures: Maximum, 26,0°C July 2, 4, 1970; minimum, freezing point on many days during winter periods. Sediment concentrations: Maximum daily, 9,310 mg/l July 29, 1969; minimum daily, no flow for many days most years. Sediment discharge: Maximum daily, 330 tons June 16, 1969; minimum daily, 0 ton on many days most years.

REMARKS.--Flow affected by ice Oct. 14 to Nov. 27, Apr. 4-12, 14-16, 18-20, 22, Apr. 28 to May 2. No flow Nov. 29 to Mar. 13, Apr. 21, 23, 24, Aug. 16-30.

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

					tones pa	TEI HEASO	inchient /					
DAy	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		1.0					0	1.5	18.0	25.0	20.5	
2		1.0					ŏ	ō	21.0	26.0	23.0	17.5
3	4.0	3.5					2.0	2.0	22.0		23.0	11.0
4		4.0					4.5	4.0		26.0	18.0	9.0
5		5.0					3.0	5.0		25.0	21.0	11.5
6		4.5					4.0	4.5	21.0	18.0	22.0	8.0
7		4.0					2.5	5.0	18.5	13.0	21.0	9.0
В		1.0					0	4.0	13.0	15.0	22.0	9.5
9		4.0					0	5.0	14.0	20.0	20.0	10.5
10		1.5					1.5	5.0	15.0	20.0	19.0	10.5
11		4.0					0	1.0	8.0	17.0	20.0	10.0
12		4-0					1.5	4.0	11.0	14.0	16.0	9.5
13		1.0						3.5		20.0	18-0	11.0
14		3.0				2.0	3.5	2.0		15.0	20.0	9.0
15		1.5				1.5	4.0	15.5		20.5	22.0	4.0
16		3.5				2.0	0	11.0		17.0		6.0
17		3.5				0	6.5	7.0		21.0		6.0
18		1.0				ŏ	4.0	6.5	17.0	22.0		6.0
19		3.0				2.0	2.0	17.0	21.0			13.0
žó		3.0				1.5	5.0	14.0	18.5			12.0
LU		,				1.,	7.0	14.0	10.5			12.0
21		2.0				3.0		19.0	21.0			7.0
22		3.0				2.0	4.5	18.0	21.0			3.0
23	0	4.0				3.0		17.0	21.5			5.5
24	6.5	0.5				2.0		21.0	22.0			3.0
25	9.0	3.5				2.0	7.0	21.5	20.5			9.0
26	4.0	0				2.0	6.5	17.0	18.0			2.5
27	5.0	0.5				3.0	5.5	16.0	21.0			4.0
28	3.0	1.5				3.0	6.0	19.5	14.0			4.0
29	3.0					2.0	0	18.5	15.0	24.0		6.0
30	3.5					0	ő	11.5	13.5	18.0		4.5
31	4.0					2.0	<u>-</u>	14.0		15.0		
AVG		2.5					3.0	10.0				6.0

PARTICIE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	TEMPER- ATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PENOED SEDI- MENT (MG/L)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/DAY)	SUS. SEO. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. FINER THAN
APR.								
08	1800	1.0	2.3	2510	16	55	84	100
SEP.								
06	1955	8.0	3.5	3100	29	88	96	100

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## 09207700 DRY PINEY CREEK NEAR BIG PINEY, WYO .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		DCTOBER	LD SCHIMENT DIS	CHARGE, WATER	NOVEMBER	DEK 1909 ID 3CF	ITUDEN 1910	DECEMBER	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT Discharge (TDNS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2	.31 .31	12 13	.01 .01	.75 .67	52 44	•11 •08			
3	.35	14 16	.01 .02	.75 .86	90 76	.18			
5 6	.35	18 20	.02 .32	.89	48 36	.12			
7 8	.35 .35	20 20 20	.02 .02	. 15 . 59 . 54	30 29	•05 •04			
9 10	.35	20 30	.02 .03	.52 .57	73 66	.1D			
11	.51	40	.06	.63	30	•05			
12 13	•58 •58	50 60	.08	.70 .63	28 34	.05			
14 15	.80 .71	70 80	•15 •15	.53 .61	32 32	.05 .05			
16 17	.85 1.0	90 100	.21 .27	•51 •48	34 38	•05 •05			
18 19	1.1	100	•27 •30 •27	.34 .25	17 20	.02			
20	1.0	110	•30	.31	28	•02			
21 22	1.1 1.2	110 110	.33 .36	.37	17 25	.02 .01			
23 24	1.1 .97	110 107	.33 .28	•16 •21	56 92	.02 .05			
25	.85	51	.12	.17	109	.05			
26 27	.76 .83	36 39	.07	.08	98 134	.02			
28 29	.91 .84	81 42	.20 .10	0	139	.01 0			
30 31	.77 .85	39 78	.08 .18	0		0			
TOTAL	21.88		4.20	13.14		1.64	o		0
		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	JANUARY  MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)	MEAN DISCHARGE (CFS)	FEBRUARY  MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MARCH MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 0 0
1 2 3	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS) U O D O	MEAN CONCEN- TRATION (MG/L) 0 0	DISCHARGE (TONS/DAY) 0 0 0
1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS) U O D O	MEAN CONCEN- TRATION (MG/L) 0 0 0 0	DISCHARGE (TONS/DAY) 0 0 0 0 0
1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS) U O D O O	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 0 0 0 0 0
1 2 3 4 5 6 7 8 9	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS) U O D O O O	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 0 0 0 0 0 0
1 2 3 4 5 6 7 8 9	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS) U O O O O O O	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TDNS/DAY) 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 8 9 10	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS) U O O O O O O O	MEAN CONCEN- TRATION O O O O O O O O O O	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 8 9 10 11 12 13	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS)  U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN CONCEN-TRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 111
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS)  U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN CONCENTRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS)  U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN CONCENTRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 111 .01
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS)  U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN CONCENTRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS)  U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN CONCENTRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS)  U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN CONCENTRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 24 25 26 27	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1 1 1 1 1 1 1 3 - 82 - 52 - 72	MEAN CONCENT OF TRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 24 25 26 27 28 29	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 1	MEAN CONCENT OF TRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 8 9 10 11 12 12 13 14 15 16 17 18 19 20 21 22 22 24 25 26 27 28	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS)  U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1	MEAN CONCENTRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

## 09207700 DRY PINEY CREEK NEAR BIG PINEY, WYO .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.0	15	.04	.17	97	.04	.14	51	•02
2	1.6	12	.05	•21	100	•06	•12	46	.01
3	1.2	15	.05	•99	380	1.0	•02	57	0
4	1.6	88C	3.8	1.8	560	2.7	•01	44	0
5	2.3	970	6.0	2.0	360	1.9	-04	46	0
6	3.1	1080	9.0	1.9	230	1.2	•66	77	-14
7	2.2	950	5.6	1.7	155	.71	.91	87	. 21
8	2.3	1170	7.3	1.2	90	•29	1.5	119	•48
9	4.1	930	10	•91	125	.31	1.9	110	.56
10	4.6	620	7.7	1.4	230	.87	2.0	130	•70
11	3.2	840	7.3	1.8	220	1.1	3.2	630	5.4
12	1.3	225	.79	1.4	170	. 64	5.8	780	12
13	1.6	110	-48	1.8	74	•36	6.0	720	12
14	-91	380	.93	•74	105	•21	4.4	280	3.3
15	•20	210	-11	•66	74	•13	3.3	116	1.0
16	.30	150	•12	.51	61	•08	3.0	148	1.2
17	.02	105	.01	.58	48	• O B	2.6	153	1.1
18	.14	228	•09	.51	33	.05	2.7	106	.77
19	.04	165	.02	-51	32	.04	2.6	160	1.1
20	•02	140	•01	.74	32	•06	2.3	113	.70
21	0	0	0	.74	28	.06	2.3	90	•56
22	.01	37	0	•66	31	.06	2.4	102	•66
23	0	0	0	• 35	17	•02	2.3	83	.52
24	0	0	0	. 35	18	•02	2.2	82	•49
25	•05	62	•01	.40	17	• 02	2.0	148	.80
26	-51	159	-22	-17	. 8	0	2.0	146	•79
27	.83	223	•50	.17	17	•01	2.2	138	.82
28	•48	197	•26	.27	11	.01	2.7	99	•72
29 30	.19	118 79	• 06	.20	32	•02	2.3	76 103	.47 .64
31	•12	79	.03	.12	17	•01	2.3	103	- 04
				.12	19	.01			
TOTAL	33.92		60.48	25.08		12.07	65.90		47.16

### 09207700 DRY PINEY CREEK NEAR BIG PINEY, WYO .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	JULY				AUGUST		SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- Tration (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)
1 2 3 4	2.2 1.7 .07	75 52 38 64	.45 .24 .01 .08	.99 .74 .40 .35	22 28 32 18	.06 .06 .03	.27 .12 .04 .01	740 135 100 94	.54 .04 .01
5 6 7 8 9	.74 .99 1.6 1.9	65 71 95 115 98	.14 .25 .50	.35 .35 .35 .35	32 106 23 12 46	.03 .10 .02 .01	.64 5.7 1.4 .40 .20	186 2780 550 62 43	.32 80 2.1 .07
10 11 12 13 14	2.0 2.2 2.2 2.0 1.6	105 98 97 98 81 77	.57 .58 .58 .53 .35	.12 .10 .06 .02 .02	22 6 7 24 26 17	.01 0 0 0	.14 .10 .10 .10	26 81 56 34 104	.01 .02 .02 .01 .02
16 17 18 19	1.4 1.5 1.2 1.1	97 84 74 72 62	. 37 . 34 . 24 . 21 . 20	0 0 0	0 0 0	0 0 0	.06 .06 .06 .04	17 38 17 25 31	0 •01 0 0
21 22 23 24 25	1.1 .99 1.1 1.1	103 63 75 49 38	.31 .17 .22 .15	0 0 0	0 0 0	0 0 0	.02 .02 .02 .02 .02	45 11 18 8	0 0 0
26 27 28 29 30	.74 .91 1.2 1.4 1.2	46 42 39 37 103	.09 .10 .13 .14 .33	0 0 0 0	0 0 0 0 0	0 0 0 0	.02 .02 .02 .02	10 14 6 9	0 0 0 0
TOTAL	39.80		8.44	6.58		33.36	9.85		B3.20

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDEO-SEDIMENT DISCHARGE FOR YEAR (TONS)
251.60

#### 09209400 GREEN RIVER NEAR LA BARGE, WYO.

COCATION. --Lat 42°11', long 110°10', in SW<sub>3</sub> sec. 33, T.26 N., R.112 W., Lincoln County, at bridge 0.7 mile north of La Barge, 6.5 miles upstream from gaging station, and 9.5 miles upstream from Muddy Creek.

DRAINAGE AREA. --3,910 sg mi, approximately (at gaging station).

PRILIO OF RECOMD. --Chemical analyses: October 1963 to September 1970.

Water temperatures: October 1963 to September 1970.

Sediment records: October 1963 to September 1970.

Sediment records: October 1968 to September 1970.

EXTREMES. --1969-70:

Dissolved solids: Maximum, 283 mg/1 Nov. 18-30; minimum, 115 mg/1 June 1-11.

Hardness: Maximum, 215 mg/1 Jan. 1-31; minimum, 84 mg/1 June 1-11.

Specific conductance: Maximum daily, 512 micrombos Nov. 20;; minimum daily, 173 micrombos June 6.

Water temperatures: Maximum, 24.0°C Aug. 7; minimum, freezing point on many days during November to April.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	MEAN DIS- CHARGE (CFS)	SILICA (SID2) (MG/L)	TDTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PD- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLD- RIOE (CL) (MG/L)
OCT.												
01-17 18-31		633 730	7.0 6.3		42 51	11	14	1.4	153 174	0	45 56	5.7
NOV.		730	0.3		21	12	16	1.1	174	U	26	7.1
01-17		642	8.2		59	13	16	1.6	189	0	62	8.2
18-30 DEC.		555	12		65	10	17	1.6	195	0	72	8.9
01-31 JAN.		396	9.3		61	15	15	1.6	180	0	69	18
01-31		378	9.6		58	17	15	1.4	182	0	81	3.6
FEB. 01-28 Mar.		412	8.2		60	12	13	1.6	171	0	77	9.9
01-31		426	7.9		52	15	16	1.9	146	18	62	8.1
APR. 01-30		733	8.8		50	16	19		176	0	73	
MAY		133	9.0		<b>5</b> 0	10	19	2.2	1/6	U	13	4.4
01-19		1200	9.3		53	13	13	2.3	159	12	57	2.4
20-25 26-31		2230 3930	9.6 7.3		44 32	7.5 3.9	7.8 5.4	1.9	125 96	9	36 21	6.1
JUNE		3930	7.5		32	3.9	2.4	1.4	96	U	21	2.4
01-11		500	6.4		23	6.2	9.0	1.6	92	0	22	1.9
12-20		4690	8.6		38	10	14	1.9	140	3	45	3.6
21-30 JULY		5410	7.6		27	8.8	8.8	1.6	118	0	19	1.5
01-07		3700	6.5		29	8.0	8.6	1.3	121	0	24	1.4
08-31		1990	6.5		34	9.7	14	1.4	140	3	30	2.5
AUG. 01-31					35							
SEP.		940	4.5		35	9.4	13	1.5	128	0	49	2.1
01-15		888	5.7		39	12	18	1.7	146	0	55	3.5
16-30		684	5.4		43	13	16	1.6	160	0	56	3.3
WTD. AVG. TIME WTD.			7.4		39	10	12	1.6	137	2	42	3.8
AVG. TONS		1225	7.8		48	12	14	1.7	157	3	57	6.0
PER DAY			25		127	33	41	5.4	452	7	137	13
				ANAL	YSES OF	ADDITIONAL	. SAMPLES					
OCT.												
02 FEB.	1815	601	8.8	110	42	11	13	1.6	140	0	53	6.5
06 MAR.	1520	A400	8.0	60	61	13	13	1.4	174	0	75	14
O6 JULY	1310	A410	7.3	130	55	19	14	1.6	177	0	78	8.1
15	1700	2240	8.2	40	34	11	12	.9	146	0	31	.8
AUG. 09 SEP.	1235	1140	4.5	90	35	11	14	1.3	135	5	44	2.6
02	1520	797	4.8	60	39	9.6	13	1.4	128	3	49	3.2
09	1820	1050	8.2	50	43	14	18	1.5	158	ĩ	62	3.5

A DAILY MEAN DISCHARGE.

### 09209400 GREEN RIVER NEAR LA BARGE, WYO. -- Continued

Period of record:
Dissolved solids: Maximum, 358 mg/l Mar. 31 to Apr. 3, 1966; minimum, 91 mg/l May 17-31, 1969.
Bardness: Maximum, 278 mg/l Jan. 19-22, 1968; minimum, 75 mg/l May 17-31, 1969.
Specific conductance: Maximum daily, 734 micromhos Jan. 22, 1968; minimum daily, 145 micromhos May 30, 1969.
Water temperatures: Maximum, 24,0°C Aug. 7, 1970; minimum, freezing point on many days during winter periods.
REMARKS.—Daily samples for chemical analysis composited by discharge. Additional samples were collected for more comprehensive definition of water quality.

#### CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED BORDN (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NDN- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC CDND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
DCT.												
01-17	.3	.1	.0	202	•29	359	152	26	-5	369	7.7	
18-31 NOV.	.3	•2	10	236	•33	477	178	35	.5	419	8.0	
01-17	• 3	•2	70	262	.35	444	200	45	.5	426	8.1	
18-30 DEC.	.4	.3	70	283	. 38	417	205	45	.5	456	8.1	
01-31	.4	•2	60	278	.37	289	213	65	.4	435	8-1	
JAN.		_	_									
01-31 FEB.	.4	.7	0	276	.3B	288	215	66	.4	456	8.0	
01-2B	.3	.4	10	266	.36	298	200	60	.4	429	B.0	
MAR. 01-31	.3	.3	20	253	.32	274	190	40	.5	435	8.5	
APR.	• •	• •	20	233	. 32	214	190	40	• • •	433	6.7	
01-30	.3	•2	40	260	.36	526	191	47	•6	465	7.8	
MAY 01-19	.3	.4	0	241	.34	816	185	35	.4	398	8.4	
20-25	.3	:4	ŏ	184	.26	1130	141	23	.3	306	8.4	
26-31	.2	- 3	0	121	.17	1340	95	16	.2	207	B.1	
JUNE 01-11	.2	.1	0	115	.16	1570	84	q	-4	195	7.9	
12-20	.3	:1	10	194	.27	2510	138	16	.5	325	B. 3	
21-30	•2	. 1	0	133	.1B	1930	104	7	.4	230	8.2	
JULY 01-07	.2	•2	20	139	• 20	1460	106	7	.4	251	8.1	
0B-31	•3	.2	30	171	.24	946	124	4	.5	299	8.4	
AUG.												
01-31 SEP•	•0	•0	0	178	.25	472	125	20	.5	308	8.2	
01-15	.3	.1	50	207	.27	470	147	27	.6	348	7.7	
16-30	.6	.0	50	218	- 30	406	160	29	.5	370	7.7	
WTD. AVO		•2	15	185	.26		138	21	.4	315	8.1	
AVG.	.3	•2	24	227	.31		170	36	.5	383	8.1	
TONS PER DAY	9	.6	0	612								
			-									
				ANA	LYSES OF	ADDITIONA	L SAMPLES					
OCT.												
02	3	.3	30	206	-29	341	150	35	.5	344	7.8	10.0
FEB., 19 06	.4	.2	0	272	.35	274	206	63	.4	422	7.9	.0
MAR.	••	••	·	212	. 33	214	200	65	••	422	1.7	.0
06	.3	•0	20	270	.36	294	215	70	.4	437	8.1	.0
JULY 15	•2	.1	40	170	.24	1060	130	10	.5			21.5
AUG.				110	• 2 4	1000	130					
09	.7	.1	20	184	.2B	628	132	13	.5			19.5
SEP. 02	.3	.3	70	187	.27	422	137	27	.5	327	8.3	18.5
09	.6	.0	30	230	.29	595	164	33	.6			1.5

#### FIELD DETERMINATIONS

TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED DXYGEN (MG/L)	PH (UNITS)	TEMPER- ATURE (DEG C)
1700	2240	282	9.4	8.6	21.5
1,00	2240	202	7.7	0.0	
1235	1140	291	9.1	B.7	19.5
1820	1050	347	9.7	8.9	15.5
	1700 1235	TIME CHARGE (CFS)  1700 2240  1235 1140	TIME CHARGE (MICRO-MICO)  1700 2240 282 1235 1140 291	TIME	TIME CHARGE (MICRO- MHOS) (MG/L) (UNITS)  1700 2240 282 9.4 8.6 1235 1140 291 9.1 8.7

## 09209400 GREEN RIVER NEAR LA BARGE, WYO.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NDV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	345	418	434	476	450	438	466	450	192	221	333	337
5	349	419	451	473	434	428	453	450	204	229	314	336
2 3	350	421	442	464	438	421	450	452	200	246	305	387
4	357	420	439	460	439	430	447	448	186	266	295	329
5	358	419	430	464	425	439	442	412	183	272	297	322
									•	•		
6	363	422	443	470	424	432	432	412	173	271	298	361
7	366	424	438	476	420	428	428	396	175	276	297	412
8	367	427	469	477	414	431	408	387	178	285	302	410
9	374	425	476	481	411	423	427	374	201	285	293	367
10	371	422	451	474	418	419	412	374	202	290	286	350
11	379	421	450	470	419	426	411	378	233	290	283	338
12	378	425	442	457	427	435	419	398	319	293	283	323
13	380	425	377	442		435	429	418	342	301	285	328
14	379	427	398	440	418	430	436	421	348	295	287	333
15	383	421	426	436	407	430	466	423	340	289	293	339
16	379	423	428	435	412	421	472	433	330	287	297	347
17	382	432	438	438		455	475	428	321	295	299	351
8 1	403	451	439	426	416	450	478	396	318	309	304	354
19	412	471	435	425	409	446	461	379	320	302	304	362
20	432	512	428	428	422	446	450	359	305	305	307	360
21	434	443	424	422	436	453	463	338	281	308	309	364
22	429	438	419	420	434	439	469	309	260	299	310	368
23	420	441	410	424	428	430	466	287	255	304	359	374
24	420	464	430	427	432	422	460	282	235	308	321	378
25	420	470	437	428	434	427	455	270	221	313	316	387
26	420	467	449	419	430			255		311		392
27	416	463	443	414		464	456	255 224	215		317 321	392 398
28	419	461			432	452	447		217	314		
29	419	470	441 462	429 499	438	459	441 441	201 182	229 228	324 337	349 329	396 398
30	427	454	468	499		448	450			346	340	400
31	420	424 	476			450	450	180 181	222	330	343	400
21	720		4/6			448		181		530	243	
AVG	392	440	438	448	426	437	447	352	248	294	309	363

### 09209400 GREEN RIVER NEAR LA BARGE, WYO .-- Continued

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	DCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	5.0	0.0	0.0	1.0	1.0	0.0	8.D	14.0	17.0	19.0	17.0
2	1D.0	4.0	1.0	0.0	0.0	1.0	0.0	5.0	16.0	19.0	22.0	18.0
3	8.0	4.0	0.0	0.0	0.0	1.0	2.0	13.0	17.0	21.0	22.0	17.0
4	4.0	4.0	0.0	0.0	0.0	1.0	2.0	14.0	18.0	22.0	20.0	16.0
Š	6.0	4.0	0.0	0.0	0.0	1.0	2.0	12.0	17.0	20.0	20.0	14.0
6	9.0	4.0	0.0	0.0	0.0	1.0	1.5	12.5	16.0	19.0	22.0	10.0
7	10.0	4.0	0.0	0.0	0.0	1.0	4.0	10.0	14.0	19.0	24.0	15.0
8	9.0	4.0	0.0	0.0	0.0	0.0	3.0	9.5	13.0	20.0	20.0	16.0
9	7.0	3.0	0.0	0.0	1.0	0.0	3.0	10.0	12.0	22.0	21.0	15.0
10	6.0	2.0	0.0	0.0	1.0	0.0	3.5	7.0	12.0	22.0	22.0	16.0
11	3.0	4.0	0.0	0.0	1.0	1.0	3.5	8.0	10.0	20.0	22.0	15.0
12	3.0	4.0	0.0	0.0	1.0	1.0	3.5	10.0	9.5	20.0	21.0	14.0
13	2.0	4.0	0.0	0.0		1.5	0.0	10.0	12.0	20.0	21.0	12.0
14	3.0	3.0	0.0	0.0	0.0	1.0	2.0	12.0	14.0	20.0	21.0	12.0
15	4.0	0.0	0.0	0.0	0.0	0.0	3.5	14.0	15.0	21.0	21.0	8.0
16	4-0	1.0	0.0	0.0	1.0	0.0	5.0	16.0	14.0	20.0	21.0	13.0
17	3.0	0.0	0.0	1.0		0.0	5.0	15.0	15.0	22.0	20.0	14.0
18	2.0	0.0	0.0	0.0	1.0	0.0	3.5	14.0	15.0	22.0	17.0	15.0
19	4.0	0.0	0.0	1.0	1.0	0.0	3.0	14.0	18.0	21.0	20.0	15.0
20	7.0	1.0	0.0	1.0	1.0	3.0	5.5	15.0	19.0	21.0	19.0	13.0
21	8.0	1.0	0.0	1.0	0.0	2.0	5.5	15.0	20.0	19.5	19.0	11.0
22	8.0	1.0	0.0	1.0	0.0	3.0	7.0	14.0	19.0	21.0	20.0	12.0
23	8.0	0.0	0.0	1.0	1.0	1.0	7.0	13.0	17.0	21.0	20.0	12.0
24	8.0	0.0	0.0	1.0	0.0	0.0	7.0	11.0	19.0	21.0	21.0	11.0
25	6.0	0.0	0.0	1.0	1.0	0.0	5.0	15.0	20.0	20.0	21.0	10.0
26	5.0	0.0	0.0	1.0	1.0	0.0	7.0	16.0	20.0	19.0	21.0	11.0
27	5.0	0.0	0.0	<b>0.</b> 0	1.0	2.0	7.0	14.0	20.0	19.0	19.0	12.0
28	4.0	0.0	0.0	0.0	0.0	0.0	5.0	13.0	20.0	21.0	20.0	12.D
29	4.0	0.0	0.0	1.0		0.0	4.0	12.0	17.0	20.0	19.0	13.0
30	4-0	0.0	0.0			0.0	5.0	12.0	15.0	20.0	20.0	13.0
31	4.0		0.0			1.0		12.0		19.0	19.0	
AVG	6.0	2.0	0.0	0.5	0.5	1.0	4.0	12.0	16.0	20.5	20.5	13.5

### 09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WYO.

LOCATION.--Lat 42°01'16", long 110°02'51", in NW1NW1NE1 sec. 31, T.24 N., R.111 W., Sweetwater County, at bridge 1 mile east of Fontenelle, 3.6 miles downstream from gaging station, and 4.6 miles downstream from Fontenelle DRAINAGE AREA.--4,500 sq mi, approximately (at gaging station).

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1970.

Mater temperatures: October 1967 to September 1970.

Sediment records: October 1968 to September 1970.

Sediment records: October 1968 to September 1969.

Dissolved solids: Maximum, 336 mg/1 Feb. 1-28; minimum, 187 mg/1 June 17-30.

Hardnoss: Maximum, 235 mg/1 Feb. 1-28; minimum, 132 mg/1 July 1-31.

Specific conductance: Maximum daily, 552 micromhos Jan. 28, 29, 31; minimum daily, 288 micromhos June 18.

DATE	TIME	MEAN DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.										_		
01-31 NOV-		1260	3.2		41	12	15	. 8	143	0	56	6 -4
01-30 DEC.		827	5.3		47	12	20	1.4	153	0	74	11
01-12		712	6.2		54	13	22	1.4	159	0	83	19
13-31 JAN.		680	7.3		61	16	24	1.6	177	0	99	23
01-31		606	7.3		60	20	26	1.4	189	0	115	6.1
FEB. 01-28		602	8.3		65	18	25	1.6	165	9	118	8.9
MAR.		002	0.3		65	10	23	1.0	105	,	****	•••
01-17		671	7.6		57	12	24	2.1	171	0	95	6.5
18-31		1260	6.7		48	14	18	1.4	168	0	58	10
APR.										_		
01-13		1410	6.4		48	14	21	1.7	166	o	79	4.4
14-30		711	6.8		51	16	24	1.9	170	0	97	4.7
MAY 01-31		1350	7.1		55	14	22	1.6	134	18	92	8.9
JUNE												
01-06		3400	7.3		55	13	16	2.3	174	0	70	9.8
07-16		3860	6.9		48	9.5	14	2.1	147	0	61	8.2
17-30		3420	6.9		42	7.3	12	1.9	122	0	49	7.2
JULY										_	_	
01-31		2080	6.7		36	10	16	1.8	134	0	47	3.5
AUG.		4110								6	43	3.2
01-31		1460	8.9		42	8.5	15	1.8	140	•	43	3.2
SEP. 01-22		1560	7.6		41	12	17	1.7	152	0	55	2.9
23-30		558	6.8		46	14	25	1.6	158	ŏ	83	3.7
23.30		,,,,	0.0		40				•		**	
WTD. AVG. TIME WTD.			6.8		47	12	18	1.7	149	2	67	7-0
AVG. TONS		1310	6.8		50	13	20	1.6	155	3	77	7.8
PER DAY			24		165	42	63	5.9	525	9	238	25
				ANAI	YSES OF	A0011100A	L SAMPLES					
DCT.												
02 JAN.	0915	930	5.8	D	41	14	17	1.4	134	0	72	5.4
17	1655	595	7.6	220	63	26	27	1.6	188	0	116	27

### 09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WYO .-- Continued

EXTREMES.--1969-70:--Continued
Water temperatures: Maximum, 19.5°C Aug. 16; minimum, 2.0°C on several days during December and January.
Period of record:
Dissolved solids: Maximum, 382 mg/1 Nov. 20-25, 1968; minimum, 154 mg/l June 11-19, 1969.
Hardness: Maximum, 240 mg/l Dec. 14-31, 1967; minimum, 115 mg/l June 11-19, 24-30, 1969.
Specific conductance: Maximum daily, 701 micromhos Dec. 23, 1967; minimum daily, 253 micromhos June 13, 1969.
Water temperatures: Maximum, 19.5°C Aug. 16, 1970; minimum, freezing point Nov. 27, Dec. 21, 1967, Feb. 1, 1968.

water temperatures: Maximum, 19.5°C Aug. 16, 1970; minimum, freezing point Nov. 27, Dec. 21, 1967, Feb. 1, 1968.
REMARKS.—Daily samples for chemical analysis composited by discharge. Additional samples were collected for more comprehensive definition of water quality. Maximum observed: Dissolved solids, 361 mg/l Jan. 17; hardness, 265 mg/l Jan. 17.

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (ND3) (MG/L)	OIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM DF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OC T. 01-31	.3	.4	0	205	.29	728	152	35	.5	366	7.6	~-
NOV.									.7	413	7.9	
01-30 DEC.	.4	.7	70	247	. 33	540	166	40	• 1	413	1.7	
01-12	.4	.3	60	277	.36	515	187	57	.7	441	B • 2	
13-31	.4	• 2	30	320	.43	580	220	75	.7	496	B-2	
JAN.		.7	0	3 30		550	230	75	.7	524	8.0	
01-31 FEB.	.4	• "	U	3 30	.46	550	230	,,	• •	,,,,	-	
01-28	.4	•5	30	336	.45	533	235	85	.7	534	8.3	
MAR.									_			
01-17	• 3	.6	20	289	.40	533	193	53	• B	495	B.2 8.2	
18-31	•3	-4	30	239	.33	850	178	40	.6	432	0.2	
APR.	-	.0	20	257	.34	952	178	42	.7	435	7.9	
01-13	.3		30	257 286	.38	541	193	54	.8	474	8.2	
14-30 May	.3	.0	30	200	. 30	341	1,,,	,	••	• • • • • • • • • • • • • • • • • • • •		
01-31	.4	•7	50	286	.39	1060	195	55	.7	461	8.4	
JUNE												
01-06	.5	-1	0	260	.34	2310	190	47	. 5	433	8.2 B.2	
07-16	-4	•2	0	222	.29	2230	160	39	-5	366		
17-30	•3	.2	20	187	. 24	1640	135	35	.4	304	B - 1	
JULY	_	_				1020	132	22	•6	323	8.2	
01-31	•3	.5	40	188	•25	1030	132	22	•0	323	***	
AUG. 01-31	.0	-0	110	19B	.27	788	140	15	. *	349	B. 5	
SEP.	.0	-0	110	170	• 2 •	100		•	-	• • •		
01-22	.3	-1	30	213	.28	868	152	27	. 6	356	7.7	
23-30	• 3	.0	40	258	.34	380	172	42	.7	424	7.7	
WTD. AVG		.3	34	236	.32		166	40	.6	394	B.1	
AVG.	3	.4	36	255	.35		17B	46	.6	424	8.1	
TONS												
PER DAY	1.1	1.2	0	B33								
				ANA	LYSES DF	ADDITIONA	L SAMPLES					
DC T.												
02	.3	.3	10	223	-32	583	161	51	-6	374	7.8	13.0
JAN.												
17	.4	٠.	70	361	.46	543	265	111	.3	527	7.B	3.5

### 09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WYO .-- Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

					10.100 27	1121 112430	///					
DAY	OCT	NOV	DEC	MAL	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	382	378	425	504	547	503	434	498	433	325	336	353
2	375	379	428	507	551	513	430	486	436	327	334	348
2	370	378	429	506	549	507	426	486	424	324	336	348
4	366	379	430	505	537	511	427	496	425	319	337	345
5	366	383	428	505	532	504	432	497	426	319	342	345
6	362	393	432	504	525	493	434	496	421	314	342	348
7	360	396	432	500	537	495	433	495	410	315	338	350
8	357	393	430	500	529	496	431	481	404	315	341	347
9	371	393	431	505	530	497	430	479	411	314	345	344
10	355	400	452	506	531	496	435	482	383	314	340	348
11	356	404	450	505	530	497	440	484	358	305	342	345
12	360	404	460	507	528	496	444	480	357	307	341	348
13	360	406	482	509	528	495	444	475	347	312	345	350
14	355	403	484	515	526	487	449	473	329	317	344	351
15	351	405	482	517	528	487	452	478	329	316	346	352
16	367	402	483	517	527	482	461	475	325	325	345	359
17	366	404	485	520	530	467	468	473	301	326	345	360
18	366	418	492	524	523	434	482	474	288	322	347	363
19	365	418	496	525	520	437	481	472	299	327	383	368
50	359	418	501	537	523	435	478	466	289	325	380	363
21	364	413	501	542	522	424	479	466	294	329	379	360
22	370	413	507	543	510	429	482	465	296	329	356	370
23	375	418	503	542	515	430	480	468	298	325	356	459
24	382	418	502	547	520	427	485	470	303	326	356	454
25	383	419	509	546	521	424	485	468	305	329	349	408
56	379	424	503	548	514	429	491	466	309	326	350	400
27	382	426	508	550	516	426	487	456	310	329	354	404
28	381	426	505	552	515	428	486	450	312	332	352	405
29	378	429	504	552		423	486	455	317	331	353	410
30	378	426	503	550		429	489	451	320	332	357	468
31	378		501	552		426		441		333	351	
AVG	368	406	473	524	527	465	459	474	349	322	349	372

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

OAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	8.0	3.5	3.0	3.0	4.5	4.0	7.0	13.0	15.0	18.5	19.0
2	13.0	8.0	3.5	2.0	3.0	5.0	4.5	7.0	13.0	15.5	18.5	19.0
3	13.0	8.0	3.0	2.0	3.0	4.5	4.5	8.0	13.0	15.5	18.0	19.0
4	12.0	8.0	3.0	2.5	3.0	4.5	4.5	8.0	13.0	17.0	18.0	18.5
5	12.0	7.0	3.0	2.0	3.0	4.5	4.5	9.0	13.0	17.0	18.0	18.0
6	13.0	7.0	3.0	2.0	4.0	5.0	5.5	9.0	13.5	17.0	18.0	17.0
7	12.0	8.0	3.0	2.0	5.0	5.5	5.5	8.0	15.0	17.0	18.5	17.0
8	12.0	7.0	3.0	2.0	5.0	6.0	5.0	8.0	14.0	17.0	18.5	18.0
9	12.0	7.0	2.5	2.0	4.0	4.0	5.0	7.5	12.0	17.0	18.0	18.0
10	12.0	7.0	2.5	3.0	3.0	4.5	5.5	6.0	13.5	17.0	18.0	18.0
11	12.0	7.0	2.5	3.5	3.5	5.0	6.0	6.5	13.5	17.0	18.0	18.0
12	10.0	7.0	3.5	4.0	3.5	5.0	5.5	8.0	13.0	17.0	18.0	16.0
13	10.0	7.0	2.5	4.0	3.5	4.5	5.5	8.0	14.0	17.0	18.5	16.0
14	10.0	6.0	2.5	3.0	3.5	5.0	5.0	8.0	14.0	18.0	18.5	15.5
15	10.0	6.0	2.5	3.0	4.0	5.0	5.0	8.5	14.0	18.0	18.5	15.5
16	10.0	6.0	2.0	3.0	3.5	4.5	5.5	9.0	14.0	18.0	19.5	15.0
17	10.0	6.0	3.0	3.5	3.5	4.0	5.0	9.0	13.5	18.0	19.0	15.0
18	10.0	5.0	3.5	3.5	3.5	4.0	6.0	9.0	12.0	18.0	18.5	15.0
19	10.0	5.0	3.5	3.5	3.0	4.0	4.5	9.0	12.5	18.0	17.0	15.0
20	9.0	4.0	3.5	3.5	2.5	4.0	5.0	10.5	14.5	18.0	15.0	14.0
21	8.0	5.0	2.5	3.5	3.0	4.0	5.0	10.5	14.0	18.0	18.0	14.5
22	8.0	5.0	2.5	3.5	4.0	3.5	5.5	11.0	14.5	18.0	18.0	14.0
23	8.0	5.0	2.5	3.5	4.0	3.5	5.5	12.0	14.0	18.0	18.0	14.0
24	8.0	5.0	2.5	3.5	4.0	4.0	6.0	11.5	14.5	18.0	19.0	11.5
25	7.0	5.0	2.5	3.5	3.5	4.0	6.0	11.0	14.5	18.0	19.0	15.0
26	8.0	5.0	2.0	3.5	4.0	4.5	6.0	11.5	15.0	18.0	19.0	12.0
27	8.0	4.0	2.0	3.5	4.0	5.0	6.0	12.0	15.0	18.0	18.5	13.0
28	8.0	4.0	2.5	3.0	4.5	4.0	5.0	13.0	14.5	18.0	18.5	13.0
29	8.0	3.0	2.5	3.0		4.0	5.5	12.0	15.0	17.0	18.5	12.0
30	8.0	4.0	2.0	3.0		4.0	6.0	12.0	14.0	17.5	18.5	12.0
31	8.0		2.0	3.0		4.0		13.0		18.5	18.5	
AVG	10.0	6.0	2.5	3.0	3.5	4.5	5.5	9.5	14.0	17.5	18.5	15.5

# 09216000 BIG SANDY RIVER BELOW EDEN, WYO.

LOCATION.--Lat 42°00', long 109°35', in SE<sup>1</sup>/<sub>2</sub> sec.31, T.24 N., R.107 W., Sweetwater County, at gaging station 0.1 mile downstream from Simpson Gulch, 8.0 miles southwest of Eden, and 8.8 miles downstream from Little Sandy Creek.

DRAINAGE AREA.--1,610 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1961 to September 1964, October 1967 to September 1970.

Sediment records: October 1968 to September 1969 (miscellaneous).

REMARKS.--Prior to October 1967, published as Big Sandy Creek below Eden, Wyo.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SID2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.		44					200			0	1580	73
20	1100 1100	43	12 9.9	40 20	273 270	126 84	329 375	3.0 3.6	262 271	ŏ	1450	62
NOV. 23	1415	A33	12	110	307	11	339	3.0	275	0	1640	70
DEC. 02	1250	A23	12	0	281	107	400	4.6	284	0	1610	68
JAN. 10	1440	A13	13	30	306	114	403	3.0	284	0	1770	61
FEB. 12	1100	21	11	10	300	103	368	4.8	262	0	1680	59
MAR. 10	1645	40	12	50	203	69	318	3.4	224	0	1200	50
APR. 12	1720	37	11	110	185	68	361	3.1	234	0	1240	58
MAY 11	1125	26	10	0	260	940	459	3.0	265	0	1660	89
JUNE 10	0830	56	14	30	170	58	286	3.6	227	0	1000	52
JULY 16 AUG.	1200	27	11	100	182	69	310	3.8	251	0	1090	56
09 SEP.	1545	38	13	50	193	67	282	4.2	229	7	1080	51
10	1220	32	12	70	245	86	356	3.5	260	0	1380	60
	DIS-			DIS- SOLVED	DIS-	DIS-		NON-	SODIUM	SPEC 1-		
DATE	SOLVED FLUO- RIDE (F)	NITRATE (NO3)	DIS- SOLVED BORON (B)	SOLIDS (SUM DF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	SOLVED SOLIDS (TONS PER	HARD- NESS (CA,MG)	CAR- BONATE HARD- NESS	AD- SORP- TION RATID	FIC COND- UCTANCE (MICRO-	РН	TEMPER-
DATE	FLUO- RIDE		SOLVED BORON	SOLIDS (SUM DF CONSTI-	SOLVED SOLIDS (TONS	SOLVED SOLIDS (TONS	NESS	CAR- BONATE HARD-	AD- SORP- Tion	FIC COND- UCTANCE	PH (UNITS)	
DATE OCT. 20 23	FLUO- RIDE (F)	(NO3)	SOLVED BORON (B)	SOLIDS (SUM DF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS	AD- SORP- TION RATID	FIC COND- UCTANCE (MICRO-		ATURE (DEG C)
20 23 NOV. 23	FLUO- RIDE (F) (MG/L)	(NO3) (MG/L) 3.3	SOLVED BORON (B) (UG/L)	SOLIDS (SUM DF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- Tion Ratid	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 7.9	(OEG C)
OCT- 20 23 NOV- 23 DEC- 02	FLUO- RIDE (F) (MG/L)	(NO3) (MG/L) 3.3 3.0	SOLVED BORON (B) (UG/L) 350	SOLIDS (SUM DF CONSTI- TUENTS) (MG/L) 2530 2390	SOLVED SOLIDS (TONS PER AC-FT) 3.63 3.43	SOLVED SOLIDS (TONS PER DAY) 317 293	NESS (CA,MG) (MG/L) 1200 1020	CAR- BONATE HARD- NESS (MG/L) 985 798	AD- SORP- TION RATID 4.1 5.1	FIC COND- UCTANCE (MICRO- MHOS) 3060	(UNITS) 7.9	ATURE (OEG C) 2.5 5.0
OCT. 20 23 NOV. 23 DEC. 02 JAN. 10	FLUO- RIDE (F) (MG/L) 1.0 .6	(NO3) (MG/L) 3.3 3.0	SOLVED BORON (B) (UG/L) 350 0	SOLIDS (SUM DF CONSTI- TUENTS) (MG/L) 2530 2390 2620	SOLVED SOLIDS (TONS PER AC-FT) 3.63 3.43 3.78	SOL VED SOLIDS (TONS PER DAY) 317 293 248	NESS (CA, MG) (MG/L) 1200 1020	CAR- BONATE HARD- NESS (MG/L) 985 798	AD- SORP- TION RATID 4-1 5-1	FIC COND- UCTANCE (MICRO- MHOS) 3060	(UNITS) 7.9	2.5 5.0 2.5
OCT. 20 23 NOV. 23 DEC. 02 JAN. 10 FEB. 12	FLUO- RIDE (F) (MG/L) 1.0 .6	(NO3) (MG/L) 3.3 3.0 3.0	SOLVED BORON (B) (UG/L) 350 0	SOLIDS (SUM DF CONSTI- TUENTS) (MG/L) 2530 2390 2620 2630	SOLVED SOLIDS (TODS PER AC-FT) 3.63 3.43 3.78	SOLVED SOLIDS (TONS PER DAY) 317 293 248 173	NESS (CA,MG) (MG/L) 1200 1020 1230 1140	CAR- BONATE HARD- NESS (MG/L) 985 798 1000	AD- SORP- TION RATID 4.1 5.1 5.2	FIC COND- UCTANCE (MICRO- MHOS) 3060	7.9  	2.5 5.0 2.5
OCT. 20 23 NOV. 23 DEC. 02 JAN. 10 FEB. 12 MAR.	FLUO- RIDE (F) (MG/L) 1.0 .6 1.0	(NO3) (MG/L) 3.3 3.0 3.0 3.4	SOLVED BORON (B) (UG/L) 350 0 330 0	SOLIDS (SUM DF CONSTI- TUENTS) (MG/L) 2530 2390 2620 2630 2810	SOLVED SOLIDS (TONS PER AC-FT) 3.63 3.43 3.78 3.78	SOL VED SOLIDS (TONS PER DAY) 317 293 248 173	NESS (CA, MG) (MG/L) 1200 1020 1230 1140	CAR- BONATE HARD- NESS (MG/L) 985 798 1000 907	AD- SORP- TION RATID 4.1 5.1 5.2 5.2	FIC COND- UCTANCE (MICRO- MHOS) 3060 	7.9  	2.5 5.0 2.5 1.5
OCT. 20 23 NOV. 23 DEC. 02 JAN. 10 FEB. 12 MAR. 10 APR.	FLUO- RIDE (F) (MG/L) 1.0 .6 1.0	(NO3) (NG/L) 3.3 3.0 3.0 3.4 4.3	SOLVED BORON (B) (UG/L) 350 0 330 0 290 350	SOLIDS (SUM DF CONSTI- TUENTS) (MG/L) 2530 2390 2620 2630 2810 2660	SOLVED SOLIDS (TONS PER AC-FT) 3.63 3.43 3.78 3.78 4.01	SOLVED SOLIDS (TONS PER DAY) 317 293 248 173 104 157	NESS (CA, MG) (MG/L) 1200 1020 1230 1140 1230 1170	CAR- BONATE HARD- NESS (MG/L) 985 798 1000 907 997	AD- SORP- TION RATID 4.1 5.1 5.2 5.2 5.0 4.7	FIC COND- UCTANCE (MICRO- MHOS) 3060 	7.9   	ATURE (OEG C)  2.5 5.0  2.5 1.5 0.0 3.0
OCT. 20 23 NDV. 23 DEC. JAN. 10 FEB. 12 MAR. 10 APR.	FLUO- RIDE (F) (MG/L) 1.0 .6 1.0 .6 .5 2.6	(NO3) (NG/L) 3.3 3.0 3.0 3.4 4.3	SOLVED BORON (B) (UG/L) 350 0 330 0 290 350 290	SOLIDS (SUM DF CONSTI- TUENTS) (MG/L) 2530 2390 2620 2630 2810 2660 1970	SOLVED SOLIDS (TONS PER AC-FT) 3.63 3.43 3.78 4.01 3.77 2.82	SOLVED SOLIDS (TONS PER DAY) 317 293 248 173 104 157	NESS (CA,MG) (MG/L) 1200 1020 1230 1140 1230 1170 790	CAR- BONATE HARD- NESS (MG/L) 985 798 1000 907 997 955	AD- SORP- TION RATID  4.1 5.1 5.2 5.2 5.0 4.7	FIC COND- UCTANCE (MICRO- MHOS) 3060  	7.9    	ATURE (OEG C)  2.5 5.0  2.5 1.5 0.0 3.0 4.0
OCT. 20 23 NOV. 23 DEC. 02 JAN. 10 FEB. 12 MAR. 10 APR. 12 MAY	FLUO- RIDE (F) (MG/L) 1.0 .6 1.0 .6 .5 2.6 2.4	(NO3) (MG/L) 3.3 3.0 3.0 3.4 4.3 3.3	SOLVED BORON (B) (UG/L) 350 0 330 0 290 350 290	SOLIDS (SUM DF CONSTI- TUENTS) (MG/L) 2530 2390 2620 2630 2810 2660 1970	SOLVED SOLIDS (TONS PER AC-FT) 3.63 3.43 3.78 3.78 4.01 3.77 2.82 2.92	SOLVED SOLIDS (TONS PER DAY) 317 293 248 173 104 157 224	NESS (CA,MG) (MG/L) 1200 1020 1230 1140 1230 1170 790	CAR- BONATE HARD- NESS (MG/L) 985 798 1000 907 997 955 606	AD- SORP- TION RATID 4-1 5-2 5-2 5-2 5-0 4-7 4-9 5-8	FIC COND- UCTANCE (MICRO- MHOS) 3060 	(UNITS) 7.9	ATURE (OEG C)  2.5 5.0  2.5 1.5 0.0 3.0 4.0 7.5
OCT. 20 23 NOV. 23 DEC. 02 JAN. 10 FEB. 12 MAR. 11 JUNE 10 JUNE 10 JULY 16 AUG.	FLUO- RIDE (F) (MG/L) 1.0 .6 1.0 .6 .5 2.6 2.4 3.2	(NO3) (NG/L) 3.3 3.0 3.0 3.4 4.3 3.3 .9 .8	SOLVED BORON (B) (UG/L) 350 0 0 330 0 290 350 290 450	SOLIDS (SUM DF CONSTITUENTS) (MG/L) 2530 2390 2620 2630 2810 2660 1970 2040 2710	SOLVED SOLIDS (TONS PER AC-FT) 3.63 3.43 3.78 4.01 3.77 2.82 2.92 4.03	SOLVED SOLIDS (TONS PER DAY) 317 293 248 173 104 157 224 215	NESS (CA, MG) (MG/L) 1200 1020 1230 1140 1230 1170 790 741 1040	CAR- BONATE HARD- NESS (MG/L) 985 798 1000 907 997 955 606 549 823	AD- SORP- TION RATID 4-1 5-1 5-2 5-2 5-0 4-7 4-9 5-8 3-0	FIC COND- UCTANCE (MICRO- MHOS) 3060	7.9    	2.5 5.0 2.5 1.5 0.0 3.0 4.0 7.5
OCT. 20 23 NOV. 23 DEC. OC. JAN. 10 FEB. 12 MAR. 10 APR. 12 MAY 11 JUNE 10 JUNY 16	FLUO- RIDE (F) (MG/L) 1.0 .6 1.0 .6 .5 2.6 2.4 3.2	(NO3) (NG7L) 3.3 3.0 3.0 3.4 4.3 3.3 .9 .8	SOLVED BORON (B) (UG/L) 350 0 330 0 290 350 290 350 380	SOLIDS (SUM DF CONSTITUENTS) (MG/L) 2530 2390 2620 2630 2810 2660 1970 2040 2710	SOLVED SOLIOS (TONS PER AC-FT) 3.63 3.43 3.78 4.01 3.77 2.82 2.92 4.03 2.48	SOLVED SOLIDS (TONS PER DAY) 317 293 248 173 104 157 224 215 208 275	NESS (CA, MG/L) 1200 1020 1230 1140 1230 1170 790 741 1040 662	CAR- BONATE HARD- NESS (MG/L) 985 798 1000 907 997 955 606 549 823	AD- SORP- TION RATID  4-1 5-1 5-2 5-2 5-0 4-7 4-9 5-8 3-0 4-8	FIC COND- UCTANCE (MICRO- MHOS) 3060	(UNITS) 7.9	ATURE (OEG C)  2.5 5.0  2.5 1.5 0.0 3.0 4.0 7.5 8.0

FIELD DETERMINATIONS

			SPECI- FIC			
			COND-	DIS-		
		D1 S-	UCTANCE	SOLVED	PH	TEMPER-
	TIME	CHARGE	(MICRO-	OXYGEN		ATURE
DATE		(CFS)	MHDS 1	(MG/L)	(UNITS)	(DEG C)
OCT.						
23	1100	43	3000	10.2	8.2	5.0
NOV.						
23	1415	A33	3450	10.3	8.1	2.5
DEC.						
02	1250	A23	3100	9.3	8.1	1.5
JAN.						
10	1440	A13	3800	8.8	8.2	0.0
FEB.						
12	1115	21	2950	11.3	8.1	3.0
MAR.						
10	1530	40	2280	8.9	8.1	4.0
APR.						
12	1720	37	2540	8.9	8.2	7.5
MAY						
11	1125	26	3250	10.4	8.2	8.0
JUNE						
10	0830	56	2170	8-2	8.3	8.5
JULY						
16	1200	27	2340	8.5	8.2	17.5
AUG.						
09	1545	38	2190	8.4	8.2	23.0
SEP.						
10	1220	32	2640	9.7	8.4	13.0

A DAILY MEAN DISCHARGE.

## 09216300 GREEN RIVER AT BIG ISLAND, NEAR GREEN RIVER, WYO.

LOCATION. --Lat 41°45'52", long 109°44'05", in SWiSE; sec. 26, T.21 N., R.109 W., Sweetwater County, at Big Island bridge, 6.2 miles downstream from Dry Creek, 9.5 miles downstream from Big Sandy River, and 21 miles northwest of town of Green River.

DRAINAGE AREA. -- 7,300 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: August 1966 to September 1970. Sediment records: October 1968 to September 1969 (miscellaneous).

REMARKS, -- Water discharge computed by adding the discharge of Big Sandy River below Eden (station 09216000) to that of Green River below Fontenelle Reservoir (station 09211200).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL ERON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOL VED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
0CT. 20 NOV.	0930	1560	5.2	60	52	17	33	1.2	153	0	142	6.1
20	1030	795	5.6	90	63	20	47	1.2	164	0	179	13
JAN. 21	1400	549	6.4	100	72	27	55	1.9	189	0	240	15
FEB. 11	1105	623	7.3	100	78	21	58	1.6	200	0	245	15
MAR. 08	1100	708	7.0	240	70	26	58	1.6	189	o	239	13
APR. 11	09 35	1430	4.2	0	55	19	37	- 9	165	0	151	10
MAY 10	1420	930	5.5	90	60	22	51	1.9	1 76	0	191	8.0
JUNE 09	1255	3940	7.1	80	49	15	23	2.1	170	0	89	4.6
JULY 15	1450	2120	5.6	100	46	11	24	1.6	140	0	91	8.2
AUG. 09	1000	1570	9.4	60	46	13	30	1.6	134	6	110	5.7
SEP. 08	1530	1650	5.6	40	48	19	33	2.1	123	18	1 30	4.8
DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UC TANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (OEG C)
OCT. 20	.4	-1	0	332	.47	1450	200	74	1.0	536	7.6	6.5
NO V.	.4	.3	20	411	.5 8	914	239	104	1.3	650	7.7	0.5
JAN. 21	.5	.5			•••							
FEB.	• • •			511	.66	71.4	290	135	1.4	743	8.0	0.0
11			40	511	.66	714	290 30.5	135	1.4	743 789	8.0 B.2	0.0
11 MAR.	.4	1.0	30	531	-72	888	30 5	141	1.4	789	B • 2	0.0
MAR. OB APR.	.5	1.0	30 50	531 508	.72 .70	888 983	30 5 28 0	141 125	1.4	789 762	8.2 8.1	0.0 3.0
MAR. 08 APR. 11 MAY	•5	1.0 .0 .3	30 50 0	531 508 359	.72 .70	888 983 1430	30 5 280 21 6	141 125 81	1.4 1.5 1.1	789 762 590	8.2 8.1 7.9	0.0 3.0 8.0
MAR. OB APR. 11 MAY 10 JUNE	.5	1.0 .0 .3	30 50 0 70	531 508 359 426	.72 .70 .50	888 983 1430 1090	30 5 280 21 6 240	141 125 81	1.4 1.5 1.1	789 762 590 667	8.1 7.9 7.7	0.0 3.0 8.0 7.5
MAR. 08 APR. 11 MAY 10 JUNE 09 JULY	.5	1.0 .0 .3 .0	30 50 0 70 50	531 508 359 426 274	.72 .70 .50 .59	888 983 1430 1090 2890	30 5 280 21 6 240 184	141 125 81 96 45	1.4 1.5 1.1 1.4	789 762 590 667 458	8.2 8.1 7.9 7.7 7.5	0.0 3.0 8.0 7.5 12.5
MAR. 08 APR. 11 MAY 10 JUNE 09 JULY 15 AUG.	.5 .5 .3 .3	1.0 .0 .3 .0 .1	30 50 0 70 50	531 508 359 426 274 257	.72 .70 .50 .59 .37	888 983 1430 1090 2890	30 5 280 21 6 240 184	141 125 81 96 45	1.4 1.5 1.1 1.4 .7	789 762 590 667 458 424	8.2 8.1 7.9 7.7 7.5	0.0 3.0 8.0 7.5 12.5
MAR. 08 APR. 11 MAY 10 JUNE 09 JULY 15	.5	1.0 .0 .3 .0	30 50 0 70 50	531 508 359 426 274	.72 .70 .50 .59	888 983 1430 1090 2890	30 5 280 21 6 240 184	141 125 81 96 45	1.4 1.5 1.1 1.4	789 762 590 667 458	8.2 8.1 7.9 7.7 7.5	0.0 3.0 8.0 7.5 12.5

### 09216950 BITTER CREEK NEAR GREEN RIVER, WYO.

LOCATION. --Lat 41°31'25", long 109°25'41", in NE<sub>1</sub>SE<sub>2</sub> sec. 24, T.18 N., R.107 W., Sweetwater County, 0.3 mile south of Interstate Highway 80 (revised), 1.7 miles east of town of Green River, and 1.9 miles upstream from mouth.

DRAINAGE AREA. -- 2,200 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: August 1966 to September 1970. Sediment records: August 1966 to September 1970 (partial records).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (S102) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	S00 IUM (NA) (MG/L)	PO- TAS- STUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLD- RIDE (CL) (MG/L)
oct.												
16 NOV.	0900	2.5	6.7	460	82	49	428	8.8	214	0	546	416
21 JAN.	1010	1.4	18	30	118	102	820	18	531	0	1040	761
10 APR.	1630	.00										
09 JULY	1700	938	7.1	1 20	94	51	226	6.9	180	o	630	117
10	1700	-90	1.7	40	135	122	1030	21	282	26	1400	961
OATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (ND3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SDLVED SOLIDS (SUM DF CDNSTI- TUENTS) (MG/L)	DIS- SDLVED SOL IDS (TONS PER AC-FT)	DIS- SOLVEO SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SDDIUM AD- SORP- TION RATIO	SPECI - FIC COND- UCTANCE (MICRO- MHOS)	PH (UNI TS)	TEMPER- ATURE (DEG C)
0CT. 16	1.0	32	70	1680	2.35	11.7	405	229	9.2	2710	7.3	0.0
NDV. 21 JAN.	2.3	5.1	960	3150	4.42	12.3	713	277	13			0.0
10 APR.											~	
09 JULY	1.7	.5	320	1220	1.70	3170	444	296	4.7			5.0
10	1.1	•0	1400	3840	5.36	9.57	838	563	16		~-	26 •0

#### FIELD DETERMINATIONS

DATE	TIMĘ	DIS- CHARGE (CFS)	D[S- SOLVED DXYGEN (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
NOV.						
21	1010	l•4	9.0	7.5	6200	0.0
JAN.						
10	1630	.00				
APR.						
09	1700	938	9.2	8.3	1540	5.0
JULY						
10	1700	•90	8.8	9.2	5220	26.0

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS AND PARTICLE-SIZE DISTRIBUTION, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TEME	TEMPER- ATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PENOED SEDI- MENT (MG/L)	SUS- PENDED SEDI- MENT DIS- CHARGE (T/OAY)	SUS. SED. FALL DIAM. % FINER THÂN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .D62 MM	SUS. SED. FALL DIAM. % FINER THAN .125 MM
OCT.	0900	0.0	2.4	77	.51			_	
APR.	0900	0.0	2.4	" "	• 21				
09	1700	5.0	938	43600	110000	51	73	95	100

## 09217000 GREEN RIVER NEAR GREEN RIVER, WYO.

05... SEP. 04...

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

			011211101112		,	LAN 00702						
				DIS-								
	DIS-			SOL.VED	DIS-	DIS-		NDN-	SODIUM	SPECI-		
	SOLVED		DIS-	SOLIDS	SOLVED	SOLVED		CAR-	AD-	FIC		
	FL.UO~		SOLVED	(SUM OF	SOLIDS	SOLIDS	HARD-	BONATE	SORP-	COND-		
	RIDE	NITRATE	BORON	CONSTI-	(TDNS	( TONS	NESS	HARD-	TION	UCTANCE	PH	TEMPER-
	(F)	(NO3)	(B)	TUENTS)	PER	PER	(CA,MG)	NESS	RATIO	(MICRO-		ATURE
DATE	(MG/L)	(MG/L)	(UG/L)	(MG/L)	AC-FT)	DAY)	(MG/L)	(MG/L)		MHOS)	(UNITS)	(DEG C)
OCT.												
01-12	-2	.1	60	377	.52	1170	20B	83	1.5	589	7.9	
13-31	.3	.1	50	356	•47	1340	204	74	1.3	553	7.5	
NOV.												
01-15	.3	.1	60	428	.61	1140	231	98	1.7	655	7.5	
16-30	.3	.1	70	455	.61	886	24B	104	1.7	698	7.5	
DEC.												
01-13	.3	.4	50	496	.69	973	263	112	1.7	747	B.1	
14-25	.2	.0	60	487	.67	955	266	113	1.7	762	7.7	
26-31	.3	•0	60	541	.74	853	296	125	1.7	808	7.9	
JAN.												
01-08	• 9	•0	60	563	.78	936	314	296	1.7	842	8.0	
09-17	.8	•0	70	475	.66	854	268	104	1.5	732	7.9	
18-31	.9	.1	80	553	.78	923	294	130	1.8	836	7.9	
				ANA	LYSES OF	ADO I T I ONA	L SAMPLES					
DCT.												
16	.4	•2	20	342	.48	1770	210	77	1.1	547	7.8	5.5
23	.2	::	50	354	.50	1440	203	72	1.1	559	8.4	10.5
NOV.	• •	•••	50	334	• 50	1440	203	12	1.5	227	0.4	10.5
21	.3	.1	40	440	.63	963	238	95	1.6	671	8.2	1.0
DEC.		•••	***	770	•05	,03	230	",	1.0	0,1	0.2	
01	•2	.1	90	470	•65	964	265	115	1.5	735	8.1	0.0
JAN.,				****	•05	,	203	•••			•••	0.0
16	.3	.3	50	457	.61	814	260	102	1.5	714	7.9	0.0
FEB.							200				,	0.0
09	.8	•0	60	518	.72	859	282	123	1.6	776	7.5	0.5
MAR.					• • •					• • • •		
07	.8	• 3	60	526	.71	961	279	117	1.7	784	8.2	2.5
APR.												• • • • • • • • • • • • • • • • • • • •
10	.9	.1	70	507	. 69	2890	240	88	2.2	801	8.0	6.5
MAY												
05	.9	.2	80	564	.84	1120	280	133	2.1	858	8.2	16.0
JUNE												
05	.3	.1	30	288	• 42	2960	196	52	.7	476	8.0	13.5
JULY												
12	.3	.1	50	248	.35	1590	158	42	•9	413	7.3	19.0

.3	•2	50	289	.42	1240	172	48	1.1	472	
•2	-0	50	288	•39	1150	173	50	1.2	473	
				FIELD D	ETERMINATI	IONS				

8.1

23.0

DATE	TIME	DIS- CHARGE (CFS)	SPECT- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED OXYGEN (MG/L)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.						
23	1815	1420	545	10.2	8.8	10.5
NOV. 21 DEC.	1230	A775	650	11.4	8.7	1.0
01	1700	A750	660	11.8	8.8	0.0
JAN.						
l6 FEB.	1615	A700	700	9.3	8.8	0.0
09	1630	A605	760	11.2	8.5	0.5
MAR.						
07 APR.	1715	682	965	10.7	8.7	2.5
10	1130	2110	655	9.6	8.2	6.5
05	1830	668	775	9.6	8.3	16.0
05	0800	3560	423	8.2	8.2	13.5
12 AUG.	1245	2260	376	8.9	8.6	19.0
05 SEP.	1700	1490	435	7.8	8.4	23.0
04	0930	1500	428	7.3	8.7	15.0

A DAILY MEAN DISCHARGE.

#### 09217000 GREEN RIVER NEAR GREEN RIVER, WYO .-- Continued

Period of record:
Dissolved solids (1951-67, 1969): Maximum, 855 mg/l Nov. 15-20, 1955; minimum, 156 mg/l May 28-31, 1958.
Hardness (1957-69): Maximum, 420 mg/l Nov. 15-20, 1055; minimum, 106 mg/l May 23-31, 1958.
Specific conductance: Maximum daily, 1,270 micromhos Nov. 26, 1968; minimum daily, 219 micromhos May 22, 1954.
Water temperatures: Maximum, 26.0°C July 8, 22, 1961, July 24, 1962; minimum, freezing point on many days during winter periods.
Sediment concentrations: Maximum daily, 15,000 mg/l Aug. 11, 1963; minimum daily, 0 mg/l Sept. 18, 1962.
Sediment discharge: Maximum daily, 110,000 tons Mar. 28, 1962; minimum daily, 0 ton Sept. 18, 1962.
REMARKS.--Daily samples for chemical analysis composited by discharge. Additional samples were collected for more comprehensive definition of water quality. Flow affected by ice Nov. 19-22, Nov. 27 to Feb. 28, Mar. 3-6, 31, Apr. 1.

#### CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SD4) (MG/L)	CHLD- RIDE (CL) (MG/L)
acr.												
01-12		1120	3.3		52	19	50	2.4	152	0	168	7.1
13-31		1440	3.7		52	18	43	2.3	158	0	152	6.4
NOV. 01-15		943	3.6		58	21				_		
16-30		726	4.7		58 63	21	58 60	2.3 2.3	162 176	0	196	8.2
DEC.		120	***		03	22	ь	2.3	110	U	208	8.5
01-13		712	5.7		66	24	63	2.1	184	0	235	10
14-25		713	5.3		67	24	62	1.2	187	ō	225	iŏ
26-31		581	6.2		74	27	68	1.9	209	0	251	10
JAN.												
01-08 09-17		606 656	7.3 6.7		78	29	68	2.6	216	0	261	10
18-31		600	6.0		68 72	24 28	56 72	1.9 1.8	200	0	211	8.3 11
20 32		500	0.0		12	20	12	1.0	200	U	263	11
				ANAL	YSES OF	AODITIONAL	. SAMPLES					
OCT.												
16	1020	1870	6.5	170	49	21	35	1.4	162	0	142	7.3
23	1815	1420	2.6	40	50	19	43	1.3	153	3	153	6.2
NOV.												
21	1230	A775	3.2	0	58	23	57	2.3	174	0	203	7.7
DEC. Ol	1700	A750	3.7	_						_		
JAN.,	1700	A150	3.7	0	66	24	56	2.1	183	0	219	8.5
16	1615	A670	6.5	30	65	24	54	1.7	192	0	205	7.7
FEB.			•••	,,,	0,	• •		•••	. , .	•	203	•••
09	1625	A605	6.3	10	70	26	62	2.0	194	0	247	9.4
MAR.												
07	1715	682	8.3	40	69	26	65	1.9	198	0	248	10
APR.	1130	2110	4.0			24				_		
10 May	1130	2110	6.9	20	57	24	77	2.8	185	0	219	28
05	1830	668	4.3	90	66	28	81	2.1	179	0	274	19
JUNE				,-			0.		,	·	217	.,
05	0800	3560	7.5	30	52	16	24	2.1	176	0	95	4.8
JULY									_			
12	1245	2260	6.1	40	40	14	26	1.6	141	0	87	3.9
AUG.	1700	1/00										
05 SEP.	1700	1490	6.2	40	44	15	33	1.8	151	0	110	4.4
04	0930	1500	6.3	120	43	16	35	1.2	142	4	108	4.3

A DAILY MEAN DISCHARGE.

#### PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	TEMPER- ATURE (DEG C)	DIS- CHARGE (CFS)	SUS- PENDED SEDI- MENT (MG/L)	SUS- PENOED SEDI- MENT DIS- CHARGE	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. # FINER THAN .062 MM
JUNE 12	0730	11.5	4400	1210	14400	77	96	100

# 09217000 GREEN RIVER NEAR GREEN RIVER, WYO .-- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	675	595	728	858	890	757	527	796	524	399	461	469
2	677	589	735	851	882	814	624	774	503	405	468	477
3	627	592	758	884	910	816	640	783	498	391	464	462
4	630	594	770	881	910	768	577	773	492	390	475	485
5	627	616	757	830	865	764	574	762	474	396	476	478
6	605	614	749	815	865	803	555	787	479	389	479	480
7	600	645	760	828	817	806	564	827	479	394	486	497
8	58l	651	736	808	817	804	569	729	474	397	484	490
9	581	669	757	748	791	803	587	704	469	394	483	489
10	563	672	735	740	818	808	571	698	457	411	467	483
11	560	662	761	748	819	805	600	680	451	405	477	484
12	548	670	733	739	819	718	605	676	424	408	477	485
13	477	681	754	741	822	794	605	675	465	406	489	485
14	476	709	694	736	803	797	610	659	491	408	489	475
15	560	688	731	727	832	854	649	631	426	418	476	490
16	591	691	754	712	835	814	677	629	415	452	480	490
17	533	701	732	714	802	774	814	607	408	454	475	522
18	532	716	719	777	800	772	814	623	382	456	513	524
19	548	828	752	779	852	683	753	574	377	444	613	495
20	547	519	759	803	845	667	855	573	370	449	514	495
21	561	509	755	801	774	662	774	576	365	452	615	503
22	564	685	748	801	772	663	822	574	364	460	574	586
23	562	691	793	837	780	636	755	57C	365	472	591	553
24	584	764	792	803	785	632	768	559	367	474	507	658
25	586	566	746	842	817	580	762	565	376	476	517	920
26	587	688	831	887	812	582	771	558	372	466	479	1080
27	590	642	830	892	814	579	854	537	388	483	478	832
28	589	711	776	851	817	585	877	530	387	469	489	879
29	604	758	776	849		576	844	527	387	498	498	724
30	598	724	851	928		574	841	526	410	497	484	791
31	605		849	936		580		512		486	490	
AVG	580	661	762	811	827	718	695	645	428	435	499	576

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.0	5.0	0.0	0.0	0.0	3.0	3.0	9.0	14.0	18.0	22.0	19.0
2	10.0	5.0	0.0	0.0	0.0	2.0	3.0	10.0	17.0	18.0	23.0	18.0
3	9.0	5.5	0.0	0.0	0.0	1.0	5.0	13.0	17.0	18.0	23.0	18.0
4	8.0	5.5	0.0	0.0	0.0	1.0	5.0	14.0	17.0	18.0	24.0	17.0
5	10.0	6.0	0.0	0.0	1.0	1.0	5.0	15.0	16.5	20.0	22.0	14.0
6	12.0	6.0	0.0	0.0	1.0	3.0	9.0	15.0	16.0	18.0	22.0	12.0
7	10.0	6.0	0.0	0.0	2.0	2.0	9.0	14.0	15.5	19.0	22.0	12.0
8	8.0	5.5	0.0	0.0	2.0	2.0	7.0	14.0	14.0	21.0	21.0	16.0
9	10.0	5.0	0.0	0.0	2.0	3.0	9.0	11.0	13.5	21.0	21.0	16.0
10	8.0	5.0	0.0	0.0	3.0	2.0	7.0	9.0	13.0	21.0	21.0	16.0
11	8.0	5.0	0.0	0.0	2.0	2.5	9.0	11.0	13.0	21.0	21.0	16.0
12	8.0	5.0	0.0	0.0	2.0	3.0	9.0	11.0	11.5	21.0	21.0	10.0
13	8.0	4.0	0.0	0.0	2.0	4.0	7.0	10.0	10.0	21.0	21.0	13.0
14	6.0	5.0	0.0	0.0	2.0	4.0	7.0	11.0	12.0	21.0	21.0	12.0
15	6.0	4.0	0.0	0.0	2.0	4.0	7.0	12.0	12.0	21.0	21.0	12.0
16	8.0	4.0	0.0	0.0	2.0	4.5	6.0	12.0	12.0	21.0	21.0	11.0
17	7.0	4.0	0.0	0.0	2.0	2.5	7.0	15.0	12.5	21.0	22.0	16.0
18	6.0	0.0	0.0	0.0	2.0	3.0	7.0	16.0	17.0	21.0	21.0	17.0
19	6.0	1.5	0.0	1.0	1.0	3.0	5.0	15.0	17.0	21.0	21.0	16.0
20	8.0	4.0	0.0	0.0	1.0	4.0	5.0	15.0	18.0	21.0	21.0	13.0
21	9.0	4.0	0.0	0.0	2.0	4.0	5.0	15.0	19.0	21.0	19.0	13.0
22	9.5	2.0	0.0	2.0	3.0	5.0	7.0	15.0	18.0	21.0	20.0	13.0
23	9.0	0.0	0.0	2.0	2.0	5.0	7.0	16.0	18.0	19.0	20.0	12.0
24	9.0	1.0	0.0	3.0	2.0	5.0	9.0	17.0	18.0	18.0	22.0	9.0
25	9.0	1.0	0.0	1.0	3.0	4.0	9.0	17.0	18.0	17.0	23.0	13.0
26	8.0	1.0	0.0	2.0	3.0	4.0	11.0	17.0	18.0	18.0	23.0	12.0
27	7.5	1.0	0.0	1.0	3.0	0.0	9.0	16.0	18.0	19.0	21.0	13.0
28	6.0	0.0	0.0	0.0	3.0	1.5	9.0	16.0	17.0	19.0	21.0	12.0
29	6.0	0.0	0.0	0.0		3.0	7.0	15.0	17.0	19.0	18.0	14-0
30	5.5	0.0	0.0	0.0		0.0	7.0	15.0	17.0	19.0	16.0	16.0
31	5.5		0.0	0.0		0.0		14.0			17.0	
AVG	8.0	3.5	0.0	0.5	2.0	3.0	7.0	13.5	15.5	19.5	21.0	14.0

# 09217000 GREEN RIVER NEAR GREEN RIVER, WYO .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		OCTOBER		DISCHARGE, WAT	NOVEMBER		27.0	DECEMBER	
	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT	MFAN	MEAN CONCEN-	SEDIMENT
DAY	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5	814 846 946 1069 1050	5 4 3 4 24	9•1 7•7 11 68	1160 1150 1150 1110 1070	5 22 14 20 12	16 68 43 60 35	750 720 687 660 740	47 357 158 218 223	95 694 293 388 446
6 7 8 9	1070 1130 1200 1260 1300	12 8 14 13 20	35 24 45 44 70	1010 933 879 862 846	12 6 2 5 4	33 15 4.7 12 9.1	700 680 700 703 700	20 4 5 4 6	38 7.3 9.5 7.6 11
11 12 13 14 15	1380 1430 1480 1530 1660	14 8 24 26 20	52 31 96 107 90	822 798 782 782 790	12 14 17 24	27 30 36 51 15	695 745 775 767 750	4 6 4 6 5	7.5 12 8.4 12 10
16 17 18 19 20	1740 1680 1610 1600 1590	27 16 15 10 9	127 73 65 43 39	790 790 726 660 740	8 20 23 16 12	17 43 45 29 24	730 705 725 675 715	4 6 4	7.9 7.6 12 7.3 7.7
21 22 23 24 25	1540 1480 1410 1370 1300	8 7 23 10 4	33 28 88 37 14	775 720 703 696 710	14 7 8 8	29 14 15 15	740 760 680 680 625	4 4 3 3 5	8.0 8.2 5.5 5.5 8.4
26 27 28 29 30 31	1260 1270 1260 1210 1170 1160	21 16 20 9 35 12	71 55 68 29 111 38	734 740 698 695 720	5 3 133 28 18	9.9 6.0 251 53 35	615 600 580 535 575 580	5 3 4 4 7 7	8.3 4.9 6.3 5.8 11
TOTAL	40806		1619.8	25041		1059.7	21292		2164.7
		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE {CFS}	JANUARY  MEAN CONCEN- TRATION (MG/L)	SFDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MARCH MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
DAY 1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN~ TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3 4	DISCHARGE (CFS) 605 575 645 640	MEAN CONCEN- TRATION (MG/L) 5 6 11 12	DISCHARGE (TONS/DAY) 8.2 9.3 19 21	DISCHARGE (CFS) 500 507 520 545	MEAN CONCEN- TRATION (MG/L) 7 8 5 6	DISCHARGE (TONS/DAY) 9.5 11 7.0 8.8	DISCHARGE (CFS) 654 703 680 665	MEAN CONCEN- TRATION (MG/L) 7 16 11	DISCHARGE (TONS/DAY) 12 30 20 16
1 2 3 4 5 6 7 8	01SCHARGE (CFS) 605 575 645 640 585 570 600 625 635	MEAN CONCENTRATION (MG/L)  5 6 11 12 8 13 8 14 10 10	OISCHARGE (TONS/DAY) 8.2 9.3 19 21 13 20 13 24	DISCHARGE (CFS) 500 507 520 545 550 570 580 590 605	MEAN CONCEN- TRATION (MG/L) 7 8 5 6 9 7 6 6 6	DISCHARGE (TONS/DAY) 9.5 11 7.0 8.8 13 11 9.4 9.6 9.8	DISCHARGE (CFS) 654 703 680 665 660 660 668 689 675	MEAN CONCEN- TRATION (MG/L) 7 16 11 9 14 30 50 10	DISCHARGE (TONS/DAY)  12 30 20 16 25 53 90 19 16
1 2 3 4 5 6 7 8 9 10	OISCHARGE (CFS)  607 575 645 640 595 570 600 625 635 630 656 660 660	MEAN CONCENTRATION (MG/L)  5 6 11 12 8 13 8 14 10 5 5 8 7 7 7 8	OISCHARGE (TONS/DAY)  8.2  9.3  19  21  13  20  13  24  17  8.5	DISCHARGE (CFS) 500 507 520 545 550 570 580 590 605 615 625 640 640 635	MEAN CONCENTRATION (MG/L)  7 8 5 6 9 7 6 6 6 6 6 8 8 8 8 7 7	DISCHARGE (TONS/DAY) 9.5 11 7.0 8.8 13 11 9.6 9.8 10	DISCHARGE (CFS)  654  703 680 665 660 668 689 675 654 640 633 647 577	MEAN CONCEN- TRATION (MG/L)  7 16 11 9 14 30 50 10 9 6 8 15 25	DISCHARGE (TONS/DAY)  1 2 30 20 16 25 53 90 19 16 11 8 6 14 26 39 9
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS)  605 575 645 640 585 570 600 625 635 630 655 660 660 660 670 670 665 670 665	MEAN CONCENTRATION (MG/L)  5	OISCHARGE (TONS/DAY)  8.2 9.3 19 21 13 20 13 24 17 8.5	DISCHARGE (CFS) 500 507 520 545 550 570 580 590 605 605 640 640 635 585 595 620 592	MEAN CONCENTRATION (MG/L)  7 8 5 6 9 7 6 6 6 6 6 8 8 8 7 7 24 16 10 6 7	DISCHARGE (TONS/DAY)  9.5 11 7.0 8.8 13 11 9.4 9.6 9.8 10 14 14 14 12 38 26 17 10 11	DISCHARGE (CFS) 654 703 680 665 660 666 668 689 675 654 640 633 647 577 612 605 633 798 897	MEAN CONCENTRATION (MG/L)  7 16 11 9 9 14 30 50 10 9 6 5 8 15 25 27 22 14 11 28	DISCHARGE (TONS/DAY)  12 30 20 16 25 53 90 19 16 11  8.6 4 4 4 4 4 4 4 4 6 8
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 12 2 2 2 2 3 2 4	DISCHARGE (CFS)  605 575 645 640 595 570 600 625 635 630 650 660 660 6670 670 665 670 645 635 635 637 645	MEAN CONCENTRATION (MG/L)  5	OISCHARGE (TONS/DAY)  8.2 9.3 19 21 13 20 13 24 17 8.5 14 12 12 12 22 22 31 10 14 25	DISCHARGE (CFS) 500 507 520 545 550 570 580 590 605 615 625 640 640 635 585 592 580 592 580 596 605 605	MEAN CONCENTRATION (MG/L)  7 8 5 6 6 9 7 7 6 6 6 6 6 8 8 8 7 7 24 16 10 6 7 7 6 6 6 6 7 7 6 6 6 6 7 7 6 6 6 6	DISCHARGE (TONS/DAY)  9.5 11 7.0 8.8 13 11 9.4 9.6 9.8 10 14 14 12 38 26 17 10 11 9.4 9.6 9.7 13	DISCHARGE (CFS) 654 703 680 665 660 660 668 669 675 654 640 633 647 577 612 603 798 897 1010 1130 1180 1180	MEAN CONCENTRATION (MG/L)  7 16 11 9 9 14 30 500 10 9 6 5 8 15 5 27 22 14 11 28 23 17 37 37 34 29	DISCHARGE (TONS/DAY)  12 30 20 16 25 53 90 19 16 11 8.6 14 26 39 45 24 24 68 63 52 118 108

#### 09217000 GREEN RIVER NEAR GREEN RIVER, WYO .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1470	15	60	726	9	18	2580	32	223
2 3	1560	39	164	718	8	16	2800	71	537
3	1620	41	179	696	23	43	3020	100	B15
4	1640	20	89	6B2	32	59	3250	116	1020
5	1640	16	71	675	11	20	3550	1 35	1290
6	1740	35	164	655	10	18	3590	163	1580
7	1920	45	233	665	7	13	3620	51	498
8	1920	37	192	72B	16	31	3640	72	70B
9	2130	31	178	B61	23	53	3670	109	1080
10	208C	39	219	946	21	54	36B0	B8	874
11	1960	23	122	942	17	43	4110	380	4220
12	1B20	16	79	956	14	36	4320	B85	10300
13	1700	15	69	1040	9	25	4030	440	4790
14	1510	14	57	1150	10	31	3910	24B	2620
15	1290	10	35	1230	12	40	3890	99	1040
16	1130	9	27	1260	10	34	3620	51	498
17	996	9	24	1260	18	61	3550	40	383
18	B79	7	17	1250	71	240	3540	51	487
19	766	8	17	1 390	44	165	3490	45	424
2G	734	7	14	1700	34	156	3460	50	467
21	718	6	12	1760	62	295	3470	24	225
22	726	7	14	1770	31	14B	3460	29	271
23	718	8	16	1760	27	128	3450	42	391
24	703	8	15	1770	40	191	3310	33	295
25	689	9	17	1770	34	162	3140	35	297
26	682	8	15	1960	37	196	3000	37	300
27	689	10	19	2100	88	499	2940	2B	222
28	734	24	4B	2350	96	609	2980	20	161
29	750	10	20	2510	67	454	2990	16	129
30	734	5	9.9	2560	65	449	2700	14	102
31	-~			2560	55	380			
TOTAL	37648		2195.9	42400		4667	102760		36247

### 09217000 GREEN RIVER NEAR GREEN RIVER, WYO .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2950	13	104	1500	25	101	1510	11	45
2	2990	11	89	1480	27	108	1510	51	208
3	3000	7	57	1460	28	110	1510	27	110
4	3020	9	73	1460	37	146	1500	11	45
5	3010	10	81	1480	77	308	1530	27	112
6	3030	37	303	1480	56	224	1620	139	608
7	2940	22	175	1470	33	131	1580	105	448
8	2700	8	58	1450	15	59	154D	25	104
9	2470	7	47	1440	18	70	1510	21	86
10	2280	6	37	1460	35	138	1510	15	61
11	2260	9	55	1460	17	67	1510	14	57
12	2250	6	36	1460	11	43	1490	20	80
13	2240	7	42	1450	13	51	1520	22	90
14	2110	10	57	1460	10	39	1540	18	75
15	1860	9	45	1450	8	31	1540	10	42
16	1660	8	36	1470	8	32	1540	8	33
17	158G	6	26	1460	9	35	1520	35	144
18	1540	5	21	1450	6	23	1530	17	70
19	1530	6	25	1300	5	18	1510	12	49
20	1540	7	29	1020	6	17	1490	80	322
21	1530	6	25	819	5	11	1500	30	122
22	1530	19	78	935	4	10	1270	6	21
23	1600	207	894	1170	6	19	886	7	17
24	1540	105	437	1160	5	16	544	10	15
25	1560	33	139	1320	12	43	377	5	5.1
26	1540	44	183	1510	11	45	370	3	3.0
27	1530	25	103	1500	12	49	559	5	7.5
28	1540	35	146	1530	12	50	567	8	12
29	1530	28	116	1530	30	124	568	6	9.2
30	152C	26	107	1530	20	83	553	4	6.0
31	1510	27	110	1520	8	33			
TOTAL	63890		3734	43184		2234	37704		3006.8

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

479516 59543.5

#### 09218500 BLACKS FORK NEAR MILLBURNE, WYO.

LOCATION. -- Lat 41°03'26", long 110°34'27", in NEISEISWI sec. 35, T.13 N., R.117 W., Uinta County, at gaging station 2.3 miles downstream from Meeks Cabin Dam, 4.0 miles north of Utah-Wyoming State line, and 15 miles southwest of Millburne.

DRAINAGE AREA. -- 156 sq mi.

PERIOD OF RECORD. -- Chemical analyses: August 1969 to May 1970 (discontinued).

CHEMICAL ANALYSES, AUGUST 1969 TO MAY 1970

DATE	TIME	DIS- Charge (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVEO CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SOD [ UM ( N A ) ( MG /L )	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
AUG 1969 27	1645	62	4.3		17	3.8	1.7	8.0	67	0	7.4	.8
NOV.	1045	O.	7+3		11	3.0	1.1	0.0	01	Ū	1.47	
23 MAY 1970	1145	A27	6.0	40	25	8.1	2. 4	• 6	106	D	11	1.0
08	1715	156	5.8	100	23	5.3	1.7	.8	96	o	10	2.2
DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	OI S- SOLVEO BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SDRP- TION RATIO	SPECI - FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
AUG 1969 27	•0	•0	0	69	•09	11.4	58	3	•1			19.0
NOV. 23	.1	.4	0	107	-15	8.02	96	9	.1			0.5
MAY 1970 08	.1	.3	D	96	.17	53.1	80	1	.1	168		0.5

A DAILY MEAN DISCHARGE.

### FIELD DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED DXYGEN (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG 1969 27	1645	62	7.3	8.5	125	19.0
NOV. 23	1145	A27	10.5	8.2	182	0.5
MAY 1970 08	1715	156	10.6	8.6	168	0.5

A DAILY MEAN DISCHARGE.

#### 09221000 SMITH FORK NEAR ROBERTSON, WYO.

LOCATION.—Lat 41°08'12", long 110°25'48", in SW½NW½ sec.6, T.13 N., R.115 W., Uinta County, upstream from canal headgate, about 1 mile upstream from former gaging station, 2.3 miles downstream from confluence of East and West Forks, and 3.4 miles southwest of Robertson.

DRAINAGE AREA .-- 144 sq mi (at gaging station).

PERIOD OF RECORD .-- Chemical analyses: August 1969 to June 1970 (discontinued).

### CHEMICAL ANALYSES, AUGUST 1969 TO JUNE 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SI 02) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) {MG/L}	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
AUG 1969 28	1430	22	7.3		16	2.7	3.0	1.0	64	0	2.6	1.7
NOV. 22	1400	20	10	70	27	4.7	4.7	1.0	107	0	7.6	3.0
JUN 1970 08	1200	162	7.5	140	10	2.1	1.9	.8	42	0	1.0	1.1
DATE	DI S- SOL VED FLUO- RI DE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CCNSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC CDND- UCTANCE (MICRD- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
AUG 1969 28	•6	.1	20	66	.10	4.16	51	0	•2			20.5
22 Jun 1970	.2	.1	10	111	-16	6.37	87	0	•2			1.0
08	•3	-4	40	46	.07	22.7	34	0	-1			10.0

#### FIELD DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED ØXYGEN (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG 1969						
28	1430	22	7.0	8 • 4	120	20.5
NOV.	1400	20	10.6			
22 JUN 1970	1400	20	10.0	8.0	174	1.0
08	1200	162	8.3	8.6	74	10.0

### 09222000 BLACKS FORK NEAR LYMAN, WYO.

USZZZOVO BLACAS FURR REGALIRAR, N.O.

LOCATION. -- Lat 41°27'08", long 110°10'20", in SWiNWiSWi sec. 15, T. 17 N., R.113 W., Uinta County, at gaging station 200 ft downstream from bridge on old U.S. Highway 30S, 8.5 miles downstream from Smiths Fork, and Il miles northeast of Lyman.

DRAINAGE AREA, -- 821 sq mi.

PERIOD OF RECORD. -- Chemical analyses: March 1962 to September 1970.

Water temperatures: May 1962 to September 1970,

Water temperatures: May 1962 to September 1969 (miscellaneous).

EXTREMENT records: October 1968 to September 1969 (miscellaneous).

Dissolved solds: Maximum, 2,880 mg/1 Aug. 27-31; minimum, 330 mg/1 May 18-31.

Hardness: Maximum, 1,230 mg/1 Aug. 27-31; minimum, 180 mg/1 May 18-31.

Specific conductance: Maximum daily, 3,790 micromhos Aug. 29; minimum daily, 406 micromhos May 21, 22.

DATE	TIME	MEAN DIS- CHARGE (CFS)	SILICA (SID2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (NG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (NG/L)	CAR- BONATE (CD3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
01-06		20	12		206	140	428	3.2	196	0	1640 1140	137 109
07-15 16-31		37 50	16 18		165 108	111 56	301 188	3.2 3.2	232 218	ŏ	610	69
NDV.		50	10		106	90	100	3				
01-15		32	12		151	66	210	2.5	218	0	825	80
16-30 DEC.		27	11		158	84	233	2.3	220	0	941	89
01-14		26			154	89	233	2.5	226	0	904	87
15-28		24	11		130	61	188	2.5	238	0	690	73
29-31		41	11		105	58	151	2.1	192	0	559	54
JAN. 01-31		41	11		105	58	151	2.1	192	0	559	54
FEB.									222		433	50
,01-28 Mar.		83	11		108	40	124	2.1	229	0	431	20
01-31		88	10		107	44	157	2.5	195	0	510	68
APR.										0	445	67
01~05 06-17		88 155	14 19		91 61	32 18	178 106	2 · B 3 · 4	205 211	0	212	42
18-26		89	13		83	33	166	3.0	192	ŏ	423	65
27-30		134	16		63	27	108	3.2	146	18	286	48
MAY			• •		63	27	108	3.2	146	18	286	48
01-04 05-10		134 198	16 14		59	26	68	2.8	140	24	194	33
11-17		155	12		72	30	108	3.0	153	18	323	46
18-31		730	14		46	16	42	2.5	134	6	114	22
JUNE 01-08		759	13		66	16	55	2.3	146	6	190	23
09-17		972	18		81	27	ากำ	3.7	207	6	296	47
18-30		338	16		121	42	126	3.0	250	0	457	46
JULY			17		170	55	233	3.7	270	0	838	75
01-15 16-31		125 47	12		203	77	320	3.2	144	ŏ	1230	103
AUG.												
01-17		33	12		188	72	301	3.0	148	12 6	1160 1640	87 80
18-26 27-31		17 16	10 11		261 276	121 131	349 428	3.5 3.9	146 149	6	1860	94
SEP.		10	••		2.0		720	247				
01-15		63	12		168	61	307	4.6	201	0	1020	66
16-30		25	7.1		209	74	315	3.5	224	0	1150	72
WTD. AVG. TIME WTD.			14		90	34	119	2.9	186	5	386	45
AVG.		137	13		132	57	197	2.9	199	2	713	67
TONS PER DAY			5.5		33	12	44	1.1	68	2	142	17
				ANA	LYSES OF	ADDITIONA	L SAMPLES					
OCT.												
18 FEB.	1740	102	22	30	75	24	176	3.7	229	0	416	51
10 AUG.	1035	A75	9.9	190	100	46	121	1.9	223	0	433	54
07	1045	41	12	50	186	70	34D	4.0	226	2	1080	88
A DATE	MEAN T	TECHARCE										

A DAILY MEAN DISCHARGE.

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09222000 BLACKS FORK NEAR LYMAN, WYO .-- Continued

EXTREMES. -- 1969-70: -- Continued

Water temperatures: Maximum, 28.0°C July 20; minimum, freezing point on many days during October to April.

Weight temperatures: Maximum, 28.0°C July 20; minimum, freezing point on many days during October to April.

Dissolved solids: Maximum, 4,000 mg/l Jan. 13-30, 1963; minimum, 248 mg/l May 9-13, 1969.

Hardness: Maximum, 1,580 mg/l Jan. 13-30, 1963; minimum, 139 mg/l May 9-13, 1969.

Specific conductance: Maximum daily, 5,140 micromhos Jan. 26, 1963; minimum daily, 392 micromhos May 11, 1969.

Water temperatures: Maximum daily, 5,140 micromhos Jan. 26, 1963; minimum daily, 392 micromhos May 11, 1969.

1969.
Water temperatures: Maximum, 28,0°C July 18, 19, 1969, July 20, 1970; minimum, freezing point on many days during winter periods.
REMARKS.—Daily samples for chemical analysis composited by discharge. Additional samples were collected for more comprehensive definition of water quality.

DATE	DIS- SOLVED FLUO- RIOE (F)	NITRATE (NO3) (MG/L)	OIS~ SOLVED BORON (B) (UG/L)	DIS- SOLVEO SOLIOS (SUM OF CONSTI- TUENTS) (MG/L)	OIS- SOLVED SOLIDS (TONS PER AC-FT)	OIS- SOLVED SOLIDS (TONS PER DAY)	HARO- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
												0,
OCT.												
01-06	1.3	.5	460	2660	3.90	155	1090	929	5.6	3360	8.2	
07-15	1.1	3.1	330	1960	2.84	209	871	681	4.4	2600	8.1	
16-31	.9	1.9	18D	1160	1.66	165	500	321	3.7	1650	8.2	
NOV.												
01-15	.9	.4	270	1460	2.04	130	651	472	3.6	1950	8.1	
16-30	1.0	• 2	320	1630	2.31	124	741	561	3.7	2160	8.0	
DEC.												
01-14	.9	.3	310	1580	2.20	114	751	566	3.7	212D	8.0	
15-28	•8	.3	270	1270	1.82	86.8	576	381	3.4	1800	8.2	
29-31	.7	•9	180	1040	1.43	116	501	343	2.9	1460	8.2	
JAN.	_	_										
01-31	• 7	.9	180	1040	1.43	116	501	343	2.9	1460	8.2	
FEB. 01-28						201			• •			
MAR.	.6	•2	120	879	1.24	204	435	247	2.6	128D	8.2	
01-31	.7	.2	170	996	1.35	236	450	290	3.2	1400	8.2	
APR.	• •	• • •	170	996	1.35	230	420	290	3.2	1400	0.2	
01-05	.5	.8	210	932	1.32	231	358	190	4.1	1380	8.1	
06-17	.5	.8	150	567	.80	247	226	53	3.1	882	8.2	
18-26	.4	.4	190	881	1.25	222	342	184	3.9	1320	8.0	
27-30	.6	:7	130	642	.89	237	270	120	2.9	963	8.6	
MAY	••	••	1,00	042	.07	231	2.00	120	2.7	703	0.0	
01-04	.6	.7	130	642	.89	237	270	120	2.9	963	8.6	
05-10	.5	.4	100	490	.69	272	252	97	1.9	775	8.6	
11-17	.6	.4	140	688	.95	292	300	144	2.7	1020	8.5	
18-31	. 5	.8	100	330	. 46	666	180	60	1.4	512	8.3	
JUNE					-							
01-08	-6	- 4	60	444	.61	914	230	100	1.6	676	8.3	
09-17	.8	.6	100	693	.97	1870	310	13D	2.7	1030	8.4	
18-30	.9	.4	200	936	1.31	876	475	270	2.5	1330	8.2	
JULY												
01-15	1.0	•6	350	1530	2.16	537	652	431	4.0	2070	8.2	
16-31	1.1	•4	410	2020	2.88	269	826	708	4.9	2700	8.2	
AUG.		_										
01-17	1.1	•2	43D	1910	2.58	169	766	625	4.7	2470	8.3	
18-26 27-31	1.2	.2	470	2540	3,56	120	1150	1020	4.5	3130	8.3	
SEP.	1.2	.2	560	2880	4.00	127	1230	1100	5.3	3470	8.3	
01-15	.9	.6	410	1740	2.56	320	670	505	6.3	2330	7.9	
16-30	1.0	:0	420	1940	2.72	135	826	642	4.8	2510	8.0	
10 30		••	420	1740	2.12	130	820	042	7.0	2310	0.0	
WTD. AVG	7	.6	154	789	1.10		363	203	2.6	1130	8.3	
TIME WID		••					303	203			•••	
AVG.	- 8	.6	251	1280	1.80		566	399	3.6	1750	8.2	
TONS									2.0	2		
PER DAY	•3	•2	0	291								
		_										
				ANAI	YSES OF	******						
				FUEL	L.JES UF !	LUNA	L JAMPLES					
OCT.												
18	.7	2.5	٥	883	1.25	252	285	97	4.5	1320	7.7	3.5
FEB.			•				203	71	7.7	1320	•••	3.3
10	.6	.5	140	876	1.22	182	438	255	2.5	1270	8.2	0.0
AUG.							,					0.0
07	1.0	.3	550	1890	2.75	224	752	563	5.4	2530	8.3	20.5

### 09222000 BLACKS FORK NEAR LYMAN, WYO .-- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					(ONCE-D	AILY MEAS	UREMENT)					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3720	2190	2200	1530	1320	1310	1520	1180	574	1710	2340	3320
2	3630	2170	2230	1510	1270	1270	1570	1050	638	1900	2290	3470
3	3620	1990	2040	1400	1230	1380	1550	1080	671	2060	2340	3540
4	3610	1870	2320	1460	1180	1500	1400	1080	644	2160	2420	3600
5	3350	1880	2150	1440	1290	1450	1240	906	632	2300	2570	1130
6	3190	1700	2110	1500	1150	1340	1000	790	661	2340	2400	1250
7	2670	1830	2040	1590	1160	1290	918	724	752	2250	2490	2080
8	2400	1970	2140	1640	1220	1420	793	728	835	2190	2550	1900
9	2420	2070	2260	1740	1260	1300	772	819	911	2190	2470	1840
10	2580	2040	2280	1840	1290	1330	872	831	928	2220	2570	1910
11	2450	2050	2270	1810	1310	1380	801	1190	855	1970	2650	2060
12	2680	2010	2170	1770	1230	1600	790	1130	1180	2070	2580	2230
13	2630	2020	2090	1730	1340	1530	918	1060	1120	2040	2610	2280
14	2570	2120	2020	1690	1280	1320	1020	1000	991	2150	2750	2330
15	2570	2110	1850	1680	1380	1270	1100	978	960	2340	2550	2110
16	2180	2290	1880	1300	1260	1300	1200	934	985	2480	2770	2260
17	1180	2270	1720	1230	1240	1480	1200	920	1120	2620	2940	2290
18	1290	2360	1780	1260	1380	1440	1310	678	1220	2610	3040	2170
19	1460	2130	1850	1270	1480	1700	1350	512	1260	2720	3070	2270
20	1870	2120	1800	1420	1360	1720	1390	456	1320	2830	3130	2460
21	1870	2270	1770	1500	1350	1670	1350	406	1310	3010	3130	2680
22	1900	2370	1650	1580	1260	1780	1310	406	1300	3140	3100	2720
23	1730	2100	1840	1700	1190	1750	1600	444	1290	3170	3130	2790
24	1630	2230	1890	1640	1210	1350	1420	567	1340	3350	3150	2700
25	1940	2190	1830	1510	1250	942	1360	572	1270	3080	3210	2790
26	1960	2240	1770	1380	1330	1150	1250	485	1300	2830	3250	2560
27	1910	2250	1830	1290	1370	1320	982	482	1360	2720	3410	2560
28	1990	2200	1760	1390	1420	1490	911	508	1440	2620	3530	2490
29	2070	2230	1540	1360		1430	976	531	1480	2370	3790	2540
30	2210	2270	1380	1460		1470	1090	605	1550	2290	3590	2510
31	2100		1470	1420		1570		526		2290	3060	

AVG 23TC 2120 1930 1520 1290 1430 1170 761 1060 2450 2870 2430

#### 09222000 BLACKS FORK NEAR LYMAN, WYO .-- Continued

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# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY ОСТ NOV SEP OEC JAN FEB MAR APR MAY JUN JuL AUG 0.0 0.0 0.0 0.0 0.0 2.0 3.5 6.0 7.5 8.0 10.5 12.D 15.0 15.0 14.5 13.0 15.0 16.0 17.0 26.0 18.0 14.0 17.0 14.0 21.0 21.5 10.0 15.0 3.0 0.0 0.0 0.0 0.5 1.0 0.5 0.5 12345 0.0 0.0 8.0 2.0 1.0 0.0 0.0 0.0 2.0 0.0 0.0 1.0 16.0 2.0 4.0 10.0 8.0 8.0 1.0 2.0 0.0 0.0 0.0 0.0 0.5 0.5 0.5 1.5 4.5 2.5 2.0 5.0 11.0 9.5 5.0 6.0 7.0 15.0 15.0 14.0 13.0 16.0 25.0 25.0 25.0 23.0 25.0 15.0 16.0 17.0 16.0 13.5 7.0 15.0 9.5 9.0 19.0 0.0 0.0 0.0 0.0 0.0 9 10 0.0 0.0 0.0 0.0 0.0 18.0 17.0 18.0 25.0 1.0 2.0 2.0 0.0 1.0 0.5 0.0 0.0 0.0 0.0 0.0 4.5 0.5 1.0 3.0 5.5 6.0 5.0 8.0 7.0 10.0 13.0 14.0 14.0 20.5 15.0 14.5 17.0 11 12 13 14 15 0.0 0.0 0.0 9.0 0.0 0.0 0.0 8.0 7.0 7.0 0.0 7.0 0.0 1.0 26.0 13.0 13.5 7.0 9.0 16.5 14.0 0.0 0.0 0.0 1.0 0.5 0.0 0.0 0.5 1.5 2.5 2.5 0.5 13.0 13.5 14.0 15.0 16.5 22.0 21.0 19.0 18.0 16.5 17.0 16.0 15.5 16.0 16 17 18 19 20 2.0 0.0 9.5 12.0 12.0 12.5 11.0 6.0 4.0 6.0 8.0 0.0 0.0 0.0 0.0 0.0 0.0 28.0 2.0 3.0 10.0 12.0 11.0 0.0 0.0 0.0 0.0 0.0 0.0 9.5 10.5 10.0 18.0 18.5 17.0 19.5 18.5 25.0 22.0 24.0 21.0 15.0 15.5 19.0 16.5 21.0 18.5 6.0 4.5 6.0 6.0 21 22 23 24 25 0.0 0.0 1.0 2.0 1.5 5.0 1.0 2.0 1.5 0.0 0.0 0.0 0.0 0.0 0.5 1.0 0.0 11.0 13.5 13.0 12.0 12.5 11.5 20.0 20.0 19.0 18.0 17.0 16.0 21.0 18.0 23.0 20.0 26.0 11.0 7.0 9.0 6.0 6.5 3.0 4.0 4.0 0.0 0.5 0.0 26 27 28 29 30 31 0.0 0.0 0.0 6.0 5.0 3.5 2.0 0.5 17.0 0.0 0.0 16.5 16.0 16.5 25.0 0.0 0.0 0.0 0.0 0.0 0.0 3.0 0.0 0.0 0.0 0.0 21.0 AVG 4.5 0.5 0.0 0.0 0.0 0.5 9.0 15.0 20.5 17.0 2.0 10.5



#### 09224450 HAMS FORK NEAR GRANGER, WYO.

LOCATION.--Lat 41°35'56", long 109°59'28", in center of sec. 30, T.19 N., R.111 W., Sweetwater County, at railroad bridge 1.2 miles northwest of Granger and 1.8 miles upstream from mouth.

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DRAINAGE AREA. -- 670 sq mi, approximately.

PERIOD OF RECORD, -- Chemical analyses: July 1965 to September 1970.

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SID2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SDLVED CAL- C IUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CD3) (MG/L)	SULFATE (SD4) (MG/L)	CHLO- RIDE (CL) (MG/L)
0CT. 19	1310	18	2.0	130	64	27	41	1.4	180	0	186	20
NO V.										_		
18 JAN.	1530	16	3.3	40	88	29	50	1.9	226	0	20 B	32
17 FEB.	1500	4.0	4.7	100	83	83	84	2.1	342	0	366	40
10 MAR.	15 20	15	2.4	90	103	30	53	1.6	248	0	235	30
08	1430	20	1.5	290	69	24	35	1.6	156	12	170	21
08	1145	46	1.8	0	82	26	38	1.4	213	0	176	24
08 JUNE	<b>090</b> D	645	12	170	62	15	10	1.8	216	0	45	4.0
06 JULY	1320	398	6.7	100	64	15	16	1.8	224	0	61	5 -1
12 AUG.	1745	80	5.4	90	74	18	41	1.6	256	0	125	13
04 SEP.	1415	24	5.1	30	59	26	47	1.9	198	12	148	16
02	1415	4.7	5.1	50	52	32	65	2.0	181	0	230	19
				DIS-								
DATE	DIS- SOLVED FLUQ- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SQLVED BORON (B) (UG/L)	SOLVED SDLIOS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TDNS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TIDN RATIO	SPECI- FIC COND- UCTANCE (MICRD- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.	SOLVED FLUQ- RIDE (F) (MG/L)	(NO3) (MG/L)	SQLVED BORON (B) (UG/L)	SDLIOS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TDNS PER DAY)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	SORP- TIDN RATIO	FIC COND- UCTANCE (MICRD- MHOS)	(UNITS)	ATURE (DEG C)
0CT. 19	SOLVED FLUQ- RIDE (F) (MG/L)	(NO3) (MG/L)	SOLVED BORON (B) (UG/L)	SDLIGS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS ITONS PER AC-FTI	SOLVED SOLIDS (TONS PER DAY)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TIDN RATIO	FIC COND- UCTANCE (MICRD- MHOS)	(UNITS) 8-0	ATURE (DEG C)
OCT. 19 NOV. 18	SOLVED FLUQ- RIDE (F) (MG/L)	(NO3) (MG/L)	SQLVED BORON (B) (UG/L)	SDLIOS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TDNS PER DAY)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	SORP- TIDN RATIO	FIC COND- UCTANCE (MICRD- MHOS)	(UNITS)	ATURE (DEG C)
OCT. 19 NOV. 18 JAN. 17	SOLVED FLUQ- RIDE (F) (MG/L)	(NO3) (MG/L)	SOLVED BORON (B) (UG/L)	SDLIGS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS ITONS PER AC-FTI	SOLVED SOLIDS (TONS PER DAY)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TIDN RATIO	FIC COND- UCTANCE (MICRD- MHOS)	(UNITS) 8-0	ATURE (DEG C)
OCT. 19 NOV. 18 JAN. 17 FE8.	SOLVED FLUQ- RIDE (F) (MG/L)	(NO3) (MG/L) •1	SOLVED BORON (B) (UG/L)	SDLIOS (SUM OF CONSTI- TUENTS) (MG/L) 430	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TDNS PER DAY) 21.5	NESS (CA, MG) (MG/L) 268 340	CAR-BONATE HARD-NESS (MG/L)	AD- SORP- TIDN RATIO	FIC COND- UCTANCE (MICRD- MHOS) 683	(UNITS) 8.0 8.1	ATURE (DEG C) 4.0 0.0
OCT. 19 NOV. 18 JAN. 17 FE8. 10 MAR. 08	SOLVED FLUG- RIDE (F) (MG/L)	(NO3) (MG/L) -1 -2	SQLVED BORON (B) (UG/L) 0 60	SDL10S (SUM OF CONSTI- TUENTS) (MG/L) 430 524 832	SOLVED SOLIDS (TONS PER AC-FT) .60 .78	SOLVED SOLIDS (TDNS PER DAY) 21.5 24.6 9.59	NESS (CA, MG) (MG/L) 268 340 551	CAR- BONATE HARD- NESS (MG/L) 120 155 270	AD- SORP- TIDN RATIO	FIC COND- UCTANCE (MICRD- MHOS) 683 B52	(UNITS) 8.0 8.1 8.0	4.0 0.0
OCT. 19 NOV. 18 JAN. 17 FEB. 10 MAR. 08 APR.	SOLVED FLUG- RIDE (F) (MG/L)	(NO3) (MG/L) -1 -2 -0	SQL VED BORON (B) (UG/L) 0 60	SDL10S (SUM OF CONSTI— TUENTS) (MG/L) 430 524 832 578	SOLVED SOLIDS (TONS PER AC-FT) .60 .7B 1.21	SOL VED SOL IDS (TDNS (TDNS PER DAY) 21.5 24.6 9.59 24.1	NESS (CA,MG) (MG/L) 268 340 551	CAR- 80NATE HARD- NESS (MG/L) 120 155 270	AD- SORP- TIDN RATIO	FIC COND- UCTANCE (MICRD- MHOS) 683 B52 1220	(UNITS) 8.0 8.1 8.0 8.2	4.0 0.0 0.0
OCT. 19 NOV. 18 JAN. 17 FEB. 10 MAR. 08 APR. 08	SOLVED FLUG- RIDE (F) (MG/L) .5 .5 .7	(NO3) (MG/L) .1 .2 .0 .2	SQLVED BORON (B) (UG/L) 0 60 130 60	SDLIOS (SUM OF CONSTI- TUENTS) (MG/L) 430 524 832 578 411	SOLVED SOLIDS (TONS PER AC-FT) .60 .7B 1.21 .81	SOLVED SOLIDS (TDNS PER DAY) 21-5 24-6 9-59 24-1 22-9	NESS (CA, MG) (MG/L) 268 340 551 380 270	CAR- BONATE HARD- NE SS (MG/L) 120 155 270 177	AD- SORP- TIDN RATIO	FIC CDD- UCT ANCE (MICRD- MHOS) 683 852 1220 891	(UNITS) 8.0 8.1 8.0 8.2 8.4	ATURE (DEG C) 4.0 0.0 0.0 0.5 1.5
OCT. 19 NOV. 18 JAN. 17 FEB. 10 MAR. 08 APR. 08 MAY 08 JUNE 06	SOLVED FLUG- RIDE (F) (MG/L) .5 .5 .7 .5	(NO3) (MG/L) •1 •2 •0 •2 •2	SQLVED BORON (B) (UG/L) 0 60 130 60	SDLIOS (SUM OF CONSTI- TUENTS) (MG/L) 430 524 832 578 411	SOLVED SOLIDS (TONS PER AC-FT) .6C .7B 1.21 .81 .58	SOLVED SOLIDS (TDNS PER DAY) 21.5 24.6 9.59 24.1 22.9 59.1	NESS (CA, MG) (MG/L) 268 340 551 380 270	CAR- BONATE HARD- NE SS (MG/L) 120 155 270 177 122	AD- SORP- TIDN RATIO 1-1 1-2 1-6 1-2	CDID- UCT ANCE (MICRD- MHOS) 683 852 1220 691 640 728	(UNITS)  8.0  8.1  8.0  8.2  8.4  7.8	ATURE (DEG C)  4.0  0.0  0.0  0.5  1.5
OCT. 19 NOV. 18 JAN. 17 FEB. 10 MAR. 08 APR. 08 MAY 08 JUNE 06 JULY 12	SOL VED FLUQ	(NO3) (MG/L) -1 -2 -0 -2 -2 -0	SOL VED BORON (B) (UG/L) 0 60 130 60	SDLIOS (SUM OF CONSTI- TUENTS) (MG/L) 430 524 832 578 411 455 258	SOLVED SOLIDS (TONS PER AC-FT) .60 .78 1.21 .81 .58 .65	SOL YED SOL IDS (TONS PER DAY)  21.5  24.6  9.59  24.1  22.9  59.1	NESS (CA, MG) (MG/L) 268 340 551 380 270 310 216	C AR- BONATE HARD- NE SS (MG/L) 120 155 270 177 122 135	1.1 1.2 1.6 1.2 .9	FIC COND- UCTANCE (MICRD- MHOS) 683 852 1220 891 640 728	(UNITS)  8.0  8.1  8.0  8.2  8.4  7.8	ATURE (DEG C) 4.0 0.0 0.0 0.5 1.5 9.5
OCT. 19 NOV. 18 JAN. 17 FE8. 10 MAR. 08 APR. 08 JUNE 06 JUNE	SOLVED FLUG- FLUG- RIDE (F) (MG/L) .5 .5 .7 .5 .5 .4 .3 .2	(NO3) (MG/L) -1 -2 -0 -2 -2 -0 2-1	SOL VED BOROM (B) (UG/L)  0 60 130 60 50	SDL10S (SUM ODF CONSTITUENTS) (MG/L) 430 524 832 578 411 455 258 280	SQL YED SQL IOS (TOMS PER AC-FT)	SOL VED SOL IDS (TDNS PER DAY) 21.5 24.6 9.59 24.1 22.9 59.1	NESS (CA,MG) (MG/L) 268 340 551 380 270 310 216	C AR- BOMATE HARD- NESS (MG/L) 120 155 270 177 122 135 39	1-1 1-2 1-6 1-2 1-9	FIGURE 1	8-0 8-1 8-0 8-2 8-4 7-8 7-6	ATURE (DEG C)  4.0  0.0  0.0  0.5  1.5  9.5  9.5
OCT. 19 NOV. 18 JAN. 17 FE8. 10 MAR. O8 APR.  V8 JUNE O6 JULY 12 AUG.	SOLVED FLUG- FLUG- RIDE (F) (MG/L) .5 .5 .7 .5 .5 .7	(NG3) (MG7L) -1 -2 -0 -2 -2 -0 2-1 -2	SOL VED BOROM (B) (UG/L)  0 60 130 60 50 20	SDL10S (SUM OF CONSTITUTENTS) (MG/L) 430 524 832 578 411 455 258 280 405	SQL VED SQL IOS SQL IOS SQL IOS SQL IOS FER AC-FT I	SOL VED SOL IDS (TDNS PER DAY) 21.5 24.6 9.59 24.1 22.9 59.1 446 314 82.9	NESS (CA, MD) (MG/L) (MG/L) 268 340 551 380 270 310 216 221 60	C AR- BOMATE HARD- NESS (MG/L) 120 155 270 177 122 135 39 37	1-1 1-2 1-6 1-2 1-6 1-2 1-6 1-2	FIGURE 1	(UNITS) 8.0 8.1 8.0 8.2 8.4 7.8 7.6 8.2 8.1	ATURE (DEG C)  4.0  0.0  0.0  0.5  1.5  9.5  18.5  23.5

#### 09224700 BLACKS FORK NEAR LITTLE AMERICA, WYO.

LOCATION.--Lat 41°32'46", long 109°41'34", in NE held to september 1508 N., R. 109 W., Sweetwater County, at gaging station 200 ft upstream from bridge on U.S. Highway 30, 4.5 miles upstream from Spider Creek, and 12 miles east of Little America.

DRAIMCE ARRA.--3,100 sg mi, approximately,
PERIOD OF RECORD.--Chemical analyses: March 1951 to September 1969 (daily), October 1969 to September 1970 (monthly).

Water temperatures: March 1951 to September 1963, December 1964 to September 1970.

Sediment records: October 1967 to September 1970.

EXTREMES.--1969-70:
Specific conductance: Maximum daily, 5,880 micromhos Dec. 25; minimum daily, 430 micromhos May 24.

Water temperatures: Maximum daily, 5,880 micromhos Dec. 25; minimum daily, 430 micromhos May 24.

Sediment concentrations: Maximum daily, 15,100 mg/1 Sept. 8; minimum, freezing point Dec. 28-30, Mar. 30.

Sediment discharge: Maximum daily, 58,200 tons June 13; minimum daily, 0.13 ton Aug. 29.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BDNATE 1HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
01-14		31	4.6		44	64	505	4.6	353	0	980	115
15-31		59	9.2		34	36	359	4.4	34B	0	578	75
NOV.						_		_				
01-14 15-30		44 38	8 • 2		130	76	409	5.6	338	0	1010	127
DEC.		38	7.8		95	68	364	5.5	347	0	855	117
01-15		35	8.8		167	72	290	4.4	388	0	8 4 D	110
16-31		29	8.4		55	58	365	4.0	369	ŏ	695	110 100
JAN.					,,,	,,,	307	4.0	307	٠	0,7	100
01-13		19	12		138	64	342	6.0	434	7	780	94
14-20		17	11		60	58	421	6.0	450	40	730	92
21-31		49	9.8		98	44	215	4.5	281	0	545	76
				ANAI	LYSES OF	ADD 1 T I ONAI	L SAMPLES					
OCT.	1.0	57										
23 NOV.	1710	21	9.7	30	87	34	219	3.3	236	8	499	61
22	1615	A48	8.1	0	160	80	320	7.0	326		0.45	•••
OEC.	1017	ATO	0.1	U	100	80	320	7.0	326	3	945	110
02	1100	A38	8.1	0	161	80	310	6.3	385	8	870	117
JAN., 19			•••	•		00	3.0	•••	307	۰	670	
17	1230	A18	12	60	50	58	467	4.3	422	81	785	87
FEB.												
10	1720	A96	8.5	10	100	38	216	4.9	267	0	570	56
MAR.												
08 APR.	1230	A140	7.8	50	89	37	124	4.0	237	0	356	66
08	1515	510	14	50		35				_		
MAY	1717	210	14	50	89	35	191	4.7	277	0	409	100
07	1830	604	5.1	100	65	24	80	3.5	256	0	172	45
JUNE					• ,	27	•	,,,	2,0	•	1.2	7,
06	1215	1210	11	60	57	17	47	3.0	182	0	144	16
JULY						= -				-		
15	1230	176	11	90	123	49	223	4.4	277	0	644	80
AUG.					_							
06 SEP.	1700	48	7.5	140	76	54	278	4.8	200	12	706	72
04	1510	7.6	4.9	20	97	54	337	3.2	119	0	970	67

A DAILY MEAN DISCHARGE.

### FIELD DETERMINATIONS

		SPECI- FIC				
TIME	DIS- CHARGE	COND- UCTANCE (MICRO-	OXAGEN SOFAEO DIR-	РН	TEMPER-	
	(CFS)	MHDS)	(MG/L)	(UNITS)	(DEG C)	
1710	57	1490	9.6	8 • 6	10.0	
1615	A 48	2250	11.7	8.4	1.5	
1100	A 38	2280	10.9	8.6	0.0	
1230	A 18	2600	10.3	9.4	0.5	
					***	
1730	A 96	1230	11.4	8.5	0.5	
1230	A 140	1180	10.1	8.6	1.0	
i515	510	1350	8.3	8-6	7.5	
1830	604	795	7.8	8.5	13.5	
1215	1210		7.5	8.4	17.5	
1230	176	1680	8.4	8.5	20.5	
1700	48	1760	8.6	8.6	25.5	
1510	7.6	2030	9.7	B.7	15.5	
	1710 1615 1100 1230 1730 1230 1515 1830 1215 1230	TIME CHARGE (CFS)  1710 57  1615 A 48  1100 A 38  1230 A 18  1730 A 96  1230 A 140  1515 510  1830 604  1215 1210  1230 176  1700 48	TIME CHARGE (CMO- DIS- UCTANCE CLARGE (MAGC)  1710 57 1490 1615 A 48 2250 1100 A 38 2280 1230 A 18 2600 1730 A 96 1230 1230 A 140 1180 1515 510 1350 1830 604 795 1215 1210 1230 176 1680 1700 48 1760	TIME	TIME CHARGE (CFS) THE COUNTY OF THE COUNTY O	TIME CHARGE (IMCRO- UCTANCE MHOS) DIS- UCTANCE (MICRO- UCTANCE (IMCRO- UCTANCE (MICRO- UCTANCE (MICRO- UMITS) (INTER- TITRE (INT

A DATLY MEAN DISCHARGE.

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#### 09224 700 BLACKS FORK NEAR LITTLE AMERICA, WYO .-- Continued

Period of record:
Dissolved solids (1951-67, 1969): Maximum, 4,480 mg/l Oct. 1-3, 1953; minimum, 278 mg/l Feb. 12, 13, 1954.
Hardness (1951-69): Maximum, 1,380 mg/l Feb. 1-14, 1955; minimum, 48 mg/l Oct. 1-3, 1953.
Specific conductance: Maximum daily (1951-64, 1965-70), 6,010 micrombos Oct. 1, 1953; minimum daily,
411 micrombos May 13, 1989.
Water temperatures (1951-62, 1966-70): Maximum, 29.0°C July 15, 16, 1955; minimum, freezing point on many
days during winter periods.
Sediment concentrations: Maximum daily, 51,100 mg/l Sept. 8, 1970; minimum daily, 4 mg/l Aug. 25, 1970.
Sediment discharge: Maximum daily, 58,200 tons June 13, 1970; minimum daily, 0.13 ton Aug. 29, 1970.
REMARKS.—Daily samples for chemical analysis composited by discharge. Additional samples were collected for more
comprehensive definition of water quality. Flow affected by ice Oct. 12, Nov. 21 to Mar. 23, Mar. 26 to Apr. 3.

#### CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	DIS- SOLVED FLUO- RIDE (F)	NITRATE (NO3)	DIS- SOLVED BORON (B)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (TONS PER	OIS- SOLVED SOLIDS (TONS PER	HARD- NESS (CA,MG)	NDN- CAR- BDNATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRD-	РН	TEMP- Erature
DATE	(MG/L)	(MG/L)	(UG/L)	(MG/L)	AC-FT)	DAY)	(MG/L)	(MG/L)		MHDS)	(UNITS)	(DEG C)
DCT.												
01-14	.6	.1	390	1890	2.52	155	373	83	11	2600	8.1 7.9	
15-31	.5	.1	310	1270	1.70	199	233	0	10	1870	7.9	
NOV. 01-14	.7	•2	480	1930	2.71	236	638	361	7.0	2660	7.9	
15-30	.6	• • • • • • • • • • • • • • • • • • • •	400	1680	2.38	180	517	232	7.0	2420	7.9	
DEC.	• • •	••	,,,,		2							
01-15	.6	.1	370	1680	2.39	166	712	394	4.7	2300	8.1	
16-31	.5	.0	310	1470	2.01	116	376	73	8.2	2120	8.0	
JAN.						85.2		240	6.0	2250	8.4	
01-13 14-20	1.9	2.3	370 330	1660 1640	2.26 2.31	78.0	608 388	240	9.3	2380	8.8	
21-31	1.5	.8	260	1120	1.59	155	426	195	4.5	1650	8.1	
		••	200									
				ANA	LYSES OF	ADDITIONA	L SAMPLES					
OCT.			_			154		150	5.0	1490		10.0
23 NOV.	.6	1.7	0	1040	1.36	154	357	150	5.0	1490		10.0
22	•6	•2	340	1790	2.50	238	727	455	5.2			1.5
DEC.	•0	• • •	340	1170	2.50	238		1.2.5				
02	.6	.1	420	1750	2.43	184	732	403	5.0		8.4	0.0
JAN., 197								_				
17	1.0	• 2	320	1750	2.39	85.5	364	0	11			0.5
FEB. 10	1.2	.0	190	112	1.19		406	187	4.7			0.5
MAR.	1.2	•0	190	112	1.19	228	400	101	***			0.0
08	.9	•0	190	802	1.12	310	374	180	2.8			1.0
APR.												
08	1.3	.6	230	981	1.33	1340	366	139	4.3			7.5
MAY		_		522	.76	910	260	50	2.2			13.5
O7···	-8	. 3	90	522	• 16	710	280	30	2.2			
06	.4	. 2	120	386	.54	1300	212	63	1.4	608		17.5
JULY	• •		120									
15	-8	.4	53D	1270	1.82	637	508	281	4.3			20.5
AUG.		_						222				25.5
06	• 6	•2	390	1310	1.86	178	412	228	6.0		8.6	23.3
SEP • 04 • • •	.7	•0	400	1590	2.18	32.8	464	366	6.8			15.5
U	• •	•0	400	1390	2.10	22.0	404	300	0.0			3344

### PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

SUS- SUS. SUS. SUS. SUS.

SUS.

DATE	TIME	TEMPER- ATURE (DEG C)	OIS- CHARGE (CFS)	SUS- PENDED SEDI- MENT (MG/L)	PENDED SEDI- MENT DIS- CHARGE (T/DAY)	SED. FALL DIAM. % FINER THAN .004 MM	SED. FALL DIAM. % FINER THAN .016 MM	SED. FALL DIAM. % FINER THAN .D62 MM	SED. FALL DIAM. % FINER THAN .125 MM	SED. FALL DIAM. % FINER THAN .250 MM
MAR.										
28 APR.	1530	3.0	127	5200	1780	85	99	100		
09 MAY	0600	5.0	406	16000	17500	76	99	100		
08	0800		686	3310	6130	58	87	100		
JUNE	1450	17.5	1220	6650	21900	49	81	100		
06	1215	17.5	1210	1190	3890	27	39	70	92	100
12 SEP.	1530	10.0	2890	8520	66500	65	84	98	100	
07	1120	10.0	789	12200	26000	80	99	100		
08	1010	7.0	330	16200	14400	83	98	100		

09224700 BLACKS FORK NEAR LITTLE AMERICA, WYO. -- Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	001	NOV	DEC	MAL	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3050	1820	2340	2230	1820	1210	1220	1030	499	1350	2010	1860
2	3140	2640	2320	2330	1910	1170	1350	1080	504	1330	1970	949
ä	3460	2770	2290	2220	1900	1260	1490	1050	541	1320	2010	980
4	3040	1920	2300	2160	1520	1290	1420	1260	585	1390	2160	1380
5	2640	2030	2230	2270	1580	1200	1470	1200	616	1390	2140	1760
6	2810	3790	2310	2420	1510	1160	1720	834	596	1520	2020	1860
7	2650	2990	2170	2760	1360	1230	1450	648	597	1490	1900	1200
8	2110	3730	2330	2210	1410	1180	1460	573	638	1640	1480	1170
9	2530	2990	2440	2280	1340	1180	1230	572	706	1720	1950	1100
10	2110	2980	2350	2200	1300	1240	906	572	773	1650	2120	1380
11	2530	2570	2340	2420	1250	1300	1000	635	814	1660	2060	1840
12	2550	2410	2200	2170	1320	1370	1080	726	892	1890	2390	1780
13	2540	2300	2250	2090	1330	1290	936	768	990	1810	2450	1730
14	2530	2160	2160	3050	1340	1180	867	730	930	1870	2450	1790
15	1830	3490	2120	2300	1330	1250	963	723	799	1860	2430	1890
16	1520	2020		2140	1280	1290	948	740	764	1790	2610	1840
17	1820	2160	2230	2200	1270	1240	1100	764	798	1660	2550	1880
18		1980	2410	2420	1280	1260	1160	723	831	1680	2470	1970
19	2460	2250	2120		1470	1270	1260	749	948	1760	2610	2070
20	2020	2280	2020	2190	1400	1390	1270	695	<b>9</b> 59	1760	2330	2100
21	1970	2460	1940	1320	1320	1430	1370	538	1000	1830	2380	2230
22	1470	2520	1870	1560	1280	1550	1320	503	1020	1370	2410	2100
23	2470	2440	1840	2390	1270	1490	1400	474	1040	1840		2090
24	1610	2560	1850	1400	1340	1580	1400	430	1090	2000	2140	2020
25	1770	2360	5880	1380	1180	1520	1370	526	1100	2010	2330	2200
26	1820	2400	1860	1560	3690	1660	1530	496	1180	1830	2380	2030
27	1740	2510	2200	1610	1250	1510	1550	542	1160		2390	2170
28	1880	2760	2090	1440	1180	1170	1370	490	1180	2290	2290	2140
29	2590	2500	1910	1770		1240	1310	490	1200	2320	1820	2210
30	2050	2480	2000	1640		1230	1120	508	1310	2440	2120	2210
31	1860		2290	1840		1230		548		2190	2140	
AVG	2290	2540	2290	2070	1480	1310	1270	697	869	1760	2220	1800

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NÐV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.5	5.0	1.0	0.5	1.0	1.5	2.5	12.0	15.0	21.5	25.0	21.0
2	17.0	5.0	1.0	0.5	1.0	1.0	3.0	12.5	17.0	22.0	24.5	19.5
3	15.0	4.5	0.5	1.0	1.0	1.0	2.0	12.5	17.5	25.0	24.5	19.5
4	14.5	4.5	0.5	0.5	0.5	1.0	3.0	14.5	17.0	23.5	23.0	14.0
5	14.5	4.5	0.5	0.5	1.0	1.0	3.0	15.0	19.0	25.0	25.0	11.0
6	15.0	4-0	1.0	0.5	1.0	1.5	10.0	14.0	16.5	24.0	24.0	9.0
7	14.5	4.0	0.5	1.0	0.5	2.0	10.0	10.0	15.0	24.5	22.5	11.0
8	13.5	3.5	0.5	1.0	0.5	2.0	5.0	8.5	16.0	24.5	22.5	9.5
9	12.0	3.0	1.0	1.0	0.5	3.0	8.0	8.0	14.5	23.5	23.0	14.0
10	9.5	3.0	1.0	1.5	1.0	3.0	9.0	8.0	14.0	24.0	23.5	15.0
11	5.0	3.0	1.0	1.5	1.5	4.0	8.0	9.5	14.0	23.5	24.0	14.5
12	4.5	4.5	1.0	1.5	1.0	4.0	8.0	9.5	10.0	23.0	24.0	13.0
13	5.0	5.0	1.0	1.0	0.5	2.0	5.5	10.0	11.5	24.5	23.0	11.5
14	3.5	5.0	1.5	1.5	0.5	4.0	4.0	12.0	15.0	24.0	23.5	11.0
15	3.0	4.5	1.0	2.0	1.5	2.0	6.0	14.0	15.5	23.5	24.0	14.0
16	3.5	3.5		2.0	1.5	3.5	7.0	15.0	15.0	24.5	24.0	15.0
17	3.5	2.0	1.5	1.0	1.0	4.0	5.0	17.0	16.0	25.0	24.0	16.0
18		2.5	1.0	1.0	0.5	3.5	8.0	16.0	17.0	24.5	23.5	15.5
19	6.5	2.0	1.0	2.0	0.5	4.0	5.5	17.0	18.5	24.0	24.0	14.0
20	5.0	3.0	1.5	2.0	1.5	2.5	6.0	17.5	22.0	23.5	23.0	14.0
21	9.0	2.0	2.0	2.5	0.5	3.5	5.0	16.0	23.0	24.0	22.5	13.0
22	7.0	1.5	1.0	3.0	1.5	4.0	7.0	16.5	22.0	24.0	23.5	14.0
23	6.5	1.5	1.5	3.0	1.0	4.0	8.5	15.0	21.5	23.0		12.0
24	7.5	1.0	1.5	2.5	1.0	4.0	9.0	16.0	23.0	23.0	24.0	12.0
25	7.5	1.0	1.5	2.0	0.5	3.5	9.0	15.5	22.0	23.0	24.0	12.5
26	7.0	1.0	0.5	1.0	1.0	2.0	10.0	15.5	23.0	23.5	24.0	14.0
27	7.0	1.0	0.5	1.0	1.0	1.5	9.0	16.0	21.0		24.0	13.5
28	5.0	1.0	0.0	1.5	1.0	3.0	9.0	17.0	20.5	23.5	23.5	13.0
29	4.5	1.0	0.0	1.0		4.0	8.5	15.0	19.0	24.0	23.0	13.5
30	4.0	1.0	0.0	1.0		0.0	8.5	16.5	20.0	24.0	23.5	13.5
31	4.0		0.5	1.0		0.5		14.0		24.5	23.0	
AVG	8.5	3.0	1.0	1.5	1.0	2.5	6.5	13.5	17.5	24.0	23.5	14.0

GREEN RIVER BASIN

09224700 BLACKS FORK NEAR LITTLE AMERICA, WYO.--Continued

#### SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

NOVEMBER

DECEMBER

OCTOBER

TOTAL

909

--

475.70

2889

1161

3930

9012

	DISCHARGE   TAAT ION   DISCHARGE   TAAT ION   DISCHARGE   DISCHARGE   TAAT ION   TIONS/DAY   TIONS/D
2 17 18 -43 47 370 47 386 115 125 124 4 226 35 115 12 12 12 12 12 12 12 12 12 12 12 12 12	2 17 18 .83 47 370 47 386 115 12 12 14 14 14 15 12 15 12 16 15 12 17 15 12 18 18 18 17 18 18 17 18 18 17 18 18 18 18 18 18 18 18 18 18 18 18 18
7 41 21 21 2.3 42 200 24 32 90 24 32 90 7.3 90 7.5 9 8 50 110 2.7 42 240 270 270 31 90 7.5 9 100 48 27 3.5 40 228 29 30 30 81 6.6 111 38 6.6 121 2.0 112 31 32 31 2.0 112 31 32 31 2.0 112 31 32 31 2.0 112 31 32 31 2.0 112 31 32 31 32 31 2.0 112 31 32 31	7 41 21 21 2.3 42 200 24 32 85 7.3  8 53 119 2.7 42 240 27 31 90 15 6.3  10 48 127 3.5 40 228 25 30 31 15 6.3  11 38 56 5.7 41 220 31 32 31 2.7  13 31 77 6.4 4 32 200 31 32 31 2.7  14 20 31 31 32 31 2.7  15 28 97 7.3 30 277 21 36 20 36 20 36 21 2.0  16 31 132 11 28 14 20 37 21 36 20 1.9  16 31 132 11 28 14 22 14 22 20 27 21 36 20 30 36 21 2.0  17 59 102 16 25 118 8.0 36 20 1.9  18 96 94 24 24 24 152 9.8 35 22 2.0  19 130 3280 1150 31 99 8.3 35 22 2.1  20 109 4140 1220 42 68 7.7 35 46 4.3  22 59 4620 736 48 80 10 31 33 22 2.1  21 79 5510 1180 48 80 10 31 33 22 2.1  22 179 5510 1180 48 80 10 31 33 22 2.1  22 179 5510 1180 48 80 10 31 30 22 2.1  23 2 2 59 4620 736 48 89 12 33 22 2.0  24 2 59 7 7 8 8 366 44 90 11 33 28 30 20 20 20 20 20 20 20 20 20 20 20 20 20
12   31	12 31 98 8.2 44 252 30 36 21 2.0 13 24 87 5.6 41 375 42 38 22 2.3 115 28 77 6.4 34 400 37 36 22 2.3 115 28 77 6.4 34 400 37 36 22 2.3 116 31 77 6.4 34 400 37 36 22 2.3 117 59 102 11 20 11 36 20 11.9 16 31 132 11 28 146 11 36 27 2.6 18 99 102 11 30 36 27 2.6 18 99 103 110 255 1118 8.0 36 27 2.6 18 99 104 105 25 1118 8.0 36 27 2.6 18 99 104 105 24 152 9.3 35 22 2.2 19 109 3140 1120 42 68 7.7 35 46 4.3 21 79 5510 1180 48 80 10 31 36 3.0 22 57 7 402 736 48 89 12 33 22 2.2 23 597 4620 736 48 8 89 12 33 22 2.2 24 597 4620 736 48 8 89 12 33 22 2.2 25 57 7 98 123 44 109 11 31 31 20 1.3 25 5 53 418 100 42 119 13 28 50 3.8 26 46 278 35 40 108 12 29 47 3.7 27 28 40 20 20 20 20 20 20 20 20 20 20 20 20 20
17   59	17   59
22 59 4620 736 48 89 12 33 23 2.0 23 57 2380 366 44 90 111 33 20 1.8 24 57 798 123 44 109 13 31 28 50 3.8 25 53 418 60 42 119 13 28 50 3.8 26 46 278 35 40 108 12 29 47 3.7 27 43 210 24 38 93 9.5 26 38 2.7 28 40 420 45 39 109 11 23 42 2.6 30 37 58 55 30 106 11 19 43 2.2 30 37 58 55 30 106 11 19 43 2.2 30 37 58 55 39 109 11 23 42 2.6 31 37 317 32 21 68 5.0  TOTAL 1430 5212.51 1214 675.3 990 154.4	22 59 4620 736 48 89 12 33 22 1.0 23 57 2380 366 44 90 11 33 20 1.8 24 57 798 123 44 109 13 31 40 3.3 25 55 53 418 60 42 119 13 28 50 3.8 26 46 278 35 40 108 12 29 47 3.7 27 43 210 24 38 93 9.5 26 38 2.7 28 40 420 45 38 93 99.5 26 38 2.7 28 40 420 45 38 93 109 11 23 42 2.6 29 38 852 85 40 106 11 12 3 42 2.6 29 38 852 85 40 106 11 120 51 23 42 2.6 30 37 538 54 39 102 11 20 51 2.8 31 37 317 32 21 88 5.0  TOTAL 1430 5212.51 1214 675.3 990 154.4    MEAN
27	27
NEAN   CINCEN-   SEDIMENT   NEAN   CINCEN-	DAY
MEAN   CONCENT	MEAN   CONCENT   TATTION   CISCHARGE   DISCHARGE   CICFS   C
MEAN   CONCENT	MEAN   CONCEN   SEDIMENT   OISCHARGE   DISCHARGE   TRATION   OISCHARGE   TRATION   OISCHARGE   OISCH
2 19 83 4.3 55 175 26 143 167 64 4 3 3 20 119 6.4 64 135 23 133 227 82 4 20 72 3.9 71 112 21 128 252 87 5 18 55 2.7 72 127 25 136 272 100 6 19 72 3.7 82 127 25 136 272 100 6 19 72 3.7 82 127 25 136 272 100 6 19 72 3.7 83 84 91 21 133 282 101 8 18 18 35 1.7 87 119 28 140 476 180 9 16 53 2.3 93 108 27 146 596 235 10 17 65 3.0 96 102 26 129 498 173 11 20 20 27 19 19 120 26 129 498 173 11 20 20 32 1.7 100 108 29 120 475 154 12 20 75 4.1 106 135 39 126 479 163 13 21 37 2.1 104 157 44 136 721 265 14 17 49 2.2 96 107 28 143 750 290 15 16 15 18 59 2.9 102 117 32 138 656 244 16 15 28 1.1 120 175 57 140 440 166 17 18 38 11 18 120 175 18 19 18 18 19 12 18 140 440 166 17 18 18 38 1.8 114 247 76 132 300 109 18 14 14 26 .99 100 214 58 110 417 124 20 18 12 20 .92 100 214 58 110 417 124 20 18 12 20 .92 100 214 58 110 417 124 20 18 12 20 .92 100 214 58 110 417 124 20 18 12 20 .92 100 214 58 110 417 124 20 18 12 20 .92 100 214 58 110 417 124 20 18 12 20 .92 100 214 58 110 417 124 20 18 12 22 37 300 109 18 14 17 20 .92 100 214 58 110 417 124 20 18 21 10 10 132 39 91 483 119 119 17 20 .92 100 214 58 110 417 124 20 18 21 10 10 132 39 91 483 119 125 125 198 13 117 131 41 100 451 122 22 37 302 30 126 98 33 100 40 126 23 34 51 190 23 137 100 37 130 332 117 25 49 193 26 134 141 51 100 37 130 332 117 25 49 193 26 134 141 51 141 51 148 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 65 488 86 141 171 65 118 3580 1140 27 60 20 20 20 20 20 20 20 20 20 20 20 20 20	2 19 83 4.3 55 175 26 143 167 64 4 4 20 172 3.9 71 112 21 128 252 87 15 18 55 2.7 72 127 25 136 272 100 10 10 10 10 10 10 10 10 10 10 10 10
7 20 61 3.3 84 91 21 133 262 101 8 8 18 35 1.7 87 119 28 140 476 180 9 16 53 2.3 93 108 27 146 596 235 10 17 65 3.0 96 102 26 129 498 173 11 20 32 1.7 100 108 29 120 475 154 12 20 75 4.1 106 135 39 126 479 163 13 21 37 2.1 104 157 44 136 721 265 14 17 49 2.2 96 107 28 143 750 290 15 16 15 18 59 2.9 102 117 32 138 656 244 16 15 18 38 1.8 114 247 76 132 300 109 18 14 26 .98 128 128 129 17 17 20 .92 100 214 58 110 417 124 20 18 12 20 .92 100 214 58 110 417 124 20 18 12 20 .92 100 214 58 110 417 124 20 18 22 37 302 30 126 98 33 100 440 126 22 37 302 30 126 98 33 100 440 126 22 37 302 30 126 98 33 100 440 126 23 45 50 160 22 134 137 130 332 117 25 49 100 37 113 39 121 22 22 37 302 30 126 98 33 100 440 126 23 45 50 160 22 134 101 37 130 332 117 25 49 100 37 113 39 121 22 24 50 160 22 134 101 37 130 332 117 25 49 193 26 134 101 37 130 332 117 25 49 193	7 20 61 3.3 84 91 21 133 282 101 8 8 18 35 1.7 87 119 28 140 476 180 9 16 53 2.3 93 108 27 146 596 235 10 17 65 3.0 96 102 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 11 20 26 129 498 173 18 18 21 18 21 106 135 39 126 479 163 13 21 37 2.1 104 157 44 136 721 265 14 17 49 2.2 96 107 28 143 750 290 15 18 59 2.9 102 117 32 138 656 244 16 15 28 1.1 120 175 57 140 440 166 17 18 38 18 1.8 114 247 76 132 306 109 18 14 26 .98 107 303 88 122 388 128 19 17 20 .92 100 214 58 110 417 124 20 18 21 1.0 110 132 39 91 483 119
12	12 20 75 4.1 106 135 39 126 479 163 13 13 21 37 2.1 104 157 44 136 721 265 14 17 49 2.2 96 107 28 143 750 290 15 18 59 2.9 102 117 32 138 656 244 16 15 28 1.1 120 175 57 140 440 166 17 18 38 1.8 114 247 76 132 306 109 18 14 26 .98 107 303 88 122 388 128 19 17 20 .92 100 214 58 110 417 124 20 18 21 1.0 110 132 39 91 483 119
17         18         38         1.8         114         247         76         132         306         109           18         14         26         .98         107         303         88         122         388         128           19         17         20         .92         100         214         58         110         417         124           20         18         21         1.0         110         132         39         91         483         119           21         25         198         13         117         131         41         100         451         122           22         37         302         30         126         98         33         106         440         126           23         45         190         23         137         100         37         113         398         121           24         50         160         22         134         101         37         130         332         117           25         49         193         26         134         141         51         148         1840         735 <td< td=""><td>17     18     38     1.8     114     247     76     132     306     109       18     14     26     .98     107     303     88     122     388     128       19     17     20     .92     100     214     58     110     417     124       20     18     21     1.0     110     132     39     91     483     119</td></td<>	17     18     38     1.8     114     247     76     132     306     109       18     14     26     .98     107     303     88     122     388     128       19     17     20     .92     100     214     58     110     417     124       20     18     21     1.0     110     132     39     91     483     119
22 37 302 30 126 98 33 106 440 126 23 45 190 37 113 398 121 24 50 160 22 134 101 37 130 332 117 25 49 193 26 134 141 51 148 1840 735 26 60 292 47 132 271 97 130 1310 460 27 65 488 86 141 171 65 118 3580 1140 28 59 314 50 148 150 60 127 6090 2090 29 52 167 23 121 2200 719 30 49 226 30 115 820 255	
27 65 488 86 141 171 65 118 3580 1140 28 59 314 50 148 150 60 127 6090 2090 29 52 167 23 121 2200 719 30 49 226 30 115 820 255	22 37 302 30 126 98 33 106 440 126
31 53 481 69 105 680 193	23 45 190 23 137 100 37 113 398 121 24 50 160 22 134 101 37 130 332 117

#### 09224700 BLACKS FORK NEAR LITTLE AMERICA, WYO .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		APRIL			MAY			JUNE	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	120	880	285	204	990	545	1790	1370 1200	6620 5480
2 3	140 140	1010 720	382 272	193 212	790 860	412 492	1690 1470	830	3290
4 5	154 154	530 580	220 241	200 200	2010 3060	1090 1650	1320 1260	790 840	2820 2860
6	151	620	253	343	2550	2360	1220	1340	4410
7	190	1600	821	604	3430	5590	1310	2420 1560	8560 5940
8 9	435 450	6600 12800	7750 15600	674 698	3060 2480	5570 4670	1410 1390	1190	4470
10	361	6500	6340	644	1260	2190	1320	820	2920
11	320	3450	2980	620	920	1540	1600	2410	10400 56200
12 13	348 392	1880 2860	1770 3030	674 582	1380 640	2510 1010	2780 28 <b>7</b> 0	7490 7510	58200
14 15	298 248	1910 1110	1540 743	520 430	730 580	1020 673	1990 1700	2810 1400	15100 6430
16	212	575	329	392	330	349	1480	852	3400
17	190	530	272	366	400	395	1160	710	2220
18 19	172 158	580 370	269 158	397 632	510 1690	547 2880	978 824	639 363	1690 808
20	151	400	163	1110	6460	19400	710	325	623
21	130	410	144	1420	5000	19200 16100	620 555	285 270	477 405
22 23	137 148	330 290	122 116	1520 1510	3920 3710	15100	510	243	335
24 25	168 179	320 910	145 440	1500 1490	2850 2080	11500 8370	555 614	278 345	417 572
26	158	1890	806	1420	2090	8010	576	319	496
27	154	1420	590	1360	1920	7050	515	310	431
28 29	186 256	1240 1510	623 1040	1380 1750	1560 1960	5810 9260	470 435	242 201	307 236
30 31	240	1350	875	2030 1970	2230 1710	12200 9100	410	158	175
TOTAL	6540		48319	27045		176593	35532		206292
		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	JULY MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	SEPTEMBER  MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	DISCHARGE (CFS) 370	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 86	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 8.1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	OISCHARGE (TONS/DAY)
1 2 3	DISCHARGE (CFS) 370 302 272	MEAN CONCEN- TRATION (MG/L) 140 141 145	DISCHARGE (TONS/DAY) 140 115 106	DI SCHARGE (CFS) 86 66 66	MEAN CONCEN- TRATION (MG/L) 35 30 32	DISCHARGE (TONS/DAY) 8.1 5.3 5.7	DISCHARGE (CFS) 12 11 9.4	MEAN CONCEN- TRATION (MG/L) 6 14 22	OISCHARGE (TONS/DAY) .19 .42 .56
1 2	DISCHARGE (CFS) 370 302	MEAN CONCEN- TRATION (MG/L) 140 141 145 120	DISCHARGE (TONS/DAY) 140 115	DISCHARGE (CFS) 86 66 66 66	MEAN CONCEN- TRATION (MG/L) 35 30 32 32	DISCHARGE (TONS/DAY) 8.1 5.3 5.7 5.7	DISCHARGE (CFS) 12 11 9.4	MEAN CONCEN- TRATION (MG/L)	01SCHARGE (TONS/DAY) .19 .42 .56
1 2 3 4 5	01SCHARGE (CFS) 370 302 272 232 204	MEAN CONCEN- TRATION (MG/L) 140 141 145 120 528	DISCHARGE (TONS/DAY) 140 115 106 75 291	DISCHARGE (CFS) 86 66 66 66 66	MEAN CONCEN- TRATION (MG/L) 35 30 32 32 31	DISCHARGE (TONS/DAY) 8.1 5.3 5.7 5.7 5.7	DISCHARGE (CFS) 12 11 9.4 10	MEAN CONCEN- TRATION (MG/L) 6 14 22 11 9	01SCHARGE (TONS/DAY) .19 .42 .56 .30 .27
1 2 3 4 5	DISCHARGE (CFS) 370 302 272 232 204 196 216	MEAN CONCEN- TRATION (MG/L) 140 141 145 120 528 270 135	DISCHARGE (TONS/DAY) 140 115 106 75 291 143 79	DISCHARGE (CFS) 86 66 66 66 66 66	MEAN CONCEN- TRATION (MG/L) 35 30 32 32 31	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.7 1.7	DISCHARGE (CFS)  12 11 9.4 10 11 40 485	MEAN CONCEN- TRATION (MG/L) 6 14 22 11 9	01SCHARGE (TONS/DAY) -19 -42 -56 -30 -27 2.1 17400
1 2 3 4 5 6 7 8	DISCHARGE (CFS)  370 302 272 232 204  196 216 200 212	MEAN CONCEN- TRATION (MG/L) 140 141 145 12c 528 270 135 181 183	DISCHARGE (TONS/DAY) 140 115 106 75 291 143 79 98 105	DI SCHARGE (CFS)  86 66 66 66 66 66 51 63 61 56	MEAN CONCEN- TRATION (MG/L) 35 30 32 32 31 12 9	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.5 1.7 1.5 1.6 -76	DISCHARGE (CFS)  12  11  9.4  10  11  40  485  321 155	MEAN CONCEN- TRATION (MG/L) 6 14 22 11 9 19 11500 15100 9910	01SCHARGE (TONS/DAY) -19 -42 -56 -30 -27 2-1 17400 13100 -4150
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 370 302 272 232 204 196 216 200	MEAN CONCEN- TRATION (MG/L) 140 141 145 120 528 270 135 181	DISCHARGE (TONS/DAY) 140 115 106 75 291 143 79 98	DI SCHARGE (CFS) 86 66 66 66 66 66 51 63 61	MEAN CONCEN- TRATION (MG/L) 35 30 32 32 31 12 9	DISCHARGE (TONS/DAY) 8.1 5.3 5.7 5.7 5.5 1.7	DISCHARGE (CFS)  12 11 9.4 10 11 40 485 321	MEAN CONCEN- TRATION (MG/L) 6 14 22 11 9 19 11500	01SCHARGE (TONS/DAY) -19 -42 -56 -30 -27 2-1 17400 13100
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 370 302 272 232 204 196 216 200 212 196	MEAN CONCEN- TRATION (MG/L) 140 141 145 120 528 270 135 181 183 163	DISCHARGE (TONS/DAY) 140 115 106 75 291 143 79 98 105 86	DI SCHARGE (CFS)  86 66 66 66 66 61 63 61 56 40	MEAN CONCENTRATION (MG/L)  35 30 32 32 31 12 9 10 5 5 12	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.5 1.7 1.5 1.6 .76 .54	DISCHARGE (CFS)  12 11 9.4 10 11 40 485 321 155 92	MEAN CONCEN- TRATION (MG/L) 6 14 22 11 9 19 1500 15100 9910 4150 2800	01SCHARGE (TONS/DAY) -19 -42 -56 -30 -27 2-1 17-000 13100 4150 1030
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 370 302 272 232 204 196 216 200 212 196	MEAN CONCENTATION (MG/L)  140 141 145 120 528 270 135 181 183 163 141 293 515	DISCHARGE (TONS/DAY) 140 115 106 75 291 143 79 98 105 86 81 193 328	DI SCHARGE (CFS)  86 66 66 66 66 63 61 51 62 92 25	MEAN CONCENTRATION (MG/L) 35 30 32 32 31 12 9 10 5 5 12 9 8	DISCHARGE (TONS/DAY)  8-1 5-3 5-7 5-7 5-7 5-5 1-7 1-5 1-6 -76 -54 1-2 -70 -54	DISCHARGE (CFS)  12 11 9-4 10 11 40 485 321 155 92 77 58 46	MEAN CONCENTATION (MG/L)  6 14 22 11 9 11500 15100 9910 4150 2800 930 132	OISCHARGE (TONS/OAY) .19 .42 .56 .30 .27 2.1 17400 13100 4150 1030 582 146 16
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 370 302 272 232 204 196 216 200 212 196 212 244	MEAN CONCENTRATION (MG/L)  140 141 145 120 528 270 135 181 183 163	DISCHARGE (TONS/DAY) 140 115 106 75 291 143 79 98 105 86	DI SCHARGE (CFS)  86 66 66 66 66 61 51 63 61 56 40 36	MEAN CONCENTATION (MG/L)  35 30 32 32 31 12 9 10 5 5 5 5 12 9 9	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.5 1.7 1.5 1.6 -76 -54	DISCHARGE (CFS)  12 11 9.4 10 11 40 485 321 155 92 77 58	MEAN CONCENTRATION (MG/L)  6 14 22 11 9 1500 15100 9910 4150 2800 9330	01SCHARGE (TONS/DAY) .19 .42 .56 .30 .27 2.1 17400 13100 4150 1030
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS)  370 302 272 232 204  196 216 200 212 196 212 244 236 208	MEAN CONCENTRATION (MG/L)  140 141 145 120 528 270 135 181 183 163 141 293 515 279	DISCHARGE (TONS/DAY) 140 115 106 75 291 143 79 98 105 86 81 193 328 157	DI SCHARGE (CFS) 86 66 66 66 51 63 61 56 40	MEAN CONCEN- TRATION (MG/L)  35 30 32 32 31 12 9 10 5 5 5 12 9 8 13	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.5 1.7 1.5 1.6 .76 .54	DISCHARGE (CFS)  12 11 9.4 10 11 40 485 321 155 92 77 58 46 36	MEAN CONCENTRATION (MG/L)  6 14 22 11 9 1500 15100 9910 4150 2800 930 132 155 94	OISCHARGE (TONS/DAY) -19 -42 -56 -30 -27 -2.1 17400 4150 1030 582 146 16 15 9.6
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 370 302 272 232 204 196 216 200 212 196 212 244 236 208 176	MEAN CONCENTRATION (MG/L)  140 141 145 120 528 270 135 181 183 163 141 293 515 279 232 215 120	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 157 110 84 40	DI SCHARGE (CFS) 86 66 66 66 66 51 63 61 56 40 36 29 25 19 16	MEAN CONCENTRATION (MG/L) 35 30 32 32 31 12 9 10 5 5 5 5	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.5 1.7 1.5 1.6 -75 -54 1.2 -70 -54 -67 -60 -26 -32	DISCHARGE (CFS)  12 11 9,4 10 11 40 485 321 155 92 77 58 46 36 38	MEAN CONCENTRATION (MG/L)  6 14 22 11 9 1900 15100 4150 2800 1320 4150 2800 1350 4450 2900 4450 457 457 45	OISCHARGE (TONS/DAY) .19 .42 .56 .30 .27 .2.1 17400 13100 4150 1030 582 146 15 .9.6 5.5 .5.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 370 302 272 232 204 196 216 200 212 214 244 236 208 176 144 124 108 98	MEAN CONCENTRATION (MG/L)  140 141 145 120 528 270 135 181 183 163 141 293 515 279 232 215 120	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 157 110 84 40 34 34	DI SCHARGE (CFS) 86 66 66 66 66 51 63 61 56 40 29 25 19 16	MEAN CONCENTRATION (MG/L) 35 30 32 32 32 31 12 9 10 5 5 5 12 9 8 8 13 14	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.5 1.7 1.5 1.6 -75 -60 -26 -22 -23 -19	DISCHARGE (CFS)  12 11 9,4 10 11 40 485 321 155 92 77 58 46 36 38 36 38	MEAN CONCENTRATION (MG/L)  6 14 22 11 9 19 11500 15100 9910 4150 2800 930 132 155 94 57 42 39 48	OISCHARGE (TONS/DAY) .19 .42 .56 .30 .27 .2.1 17400 13100 4150 1030 582 146 15 .5.5 .4.3 3.8 4.7
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 370 300 277 232 204 196 216 200 212 196 212 244 236 208 176 144 124 108	MEAN CONCER TRAFILM (MG/L)  140 141 145 120 528 270 135 181 183 163 141 293 515 279 232 215 120	DISCHARGE (TONS/DAY) 140 115 106 75 291 143 79 98 105 86 81 193 328 157 110	DI SCHARGE (CFS)  86 66 66 66 66 61 63 61 56 40 36 29 25 19 16 14	MEAN CONCENTRATION (MG/L) 35 30 32 31 12 9 10 5 5 5 5 12 9 10 7 7 7	DISCHARGE (TONS/DAY)  8-1 5-3 5-7 5-7 5-7 5-7 1-5 1-6 -76 -54 1-2 -70 -54 -67 -60 -26 -32 -23	01SCHARGE (CFS) 12 11 9.4 10 11 40 485 321 155 92 77 58 46 36 38 38	MEAN CONCENTRATION (MG/L)  6 14 22 11 9 11500 15100 2800 9910 4150 2800 930 132 155 94 57 42 39	OISCHARGE (TONS/DAY) .19 .42 .56 .30 .27 2.1 17400 13100 4150 1030 582 146 15 9.6 5.5 4.3 3.8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	DISCHARGE (CFS) 370 300 277 232 204 196 216 200 212 196 212 244 236 208 176 144 124 108 98 101	MEAN CONCER TRAFILDN (MG/L)  140 141 145 120 528 270 135 181 183 163 163 164 1293 225 120 117 128 100 100 100 100 100 100 100 100 100 10	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 157 110 84 40 34 34 34 29	DI SCHARGE (CFS) 86 66 66 66 66 61 63 61 56 40 36 29 25 19 16 14 17 14 12 12	MEAN CONCENTRATION (MG/L) 35 30 32 32 31 12 9 10 5 5 5 12 9 8 8 8	DISCHARGE (TONS/DAY)  8-1 5-3 5-7 5-7 5-7 5-7 1-5 1-6 -76 -54 1-2 -70 -60 -26 -32 -23 -19 -26 -26	01SCHARGE (CFS) 12 11 9.4 10 11 40 485 321 155 92 77 58 46 36 38 36 38 36 36 36	MEAN CONCENTRATION (MG/L)  6 14 22 111 9 11500 15100 4150 2800 930 132 155 94 8 73 55	OISCHARGE (TONS/DAY) .19 .42 .56 .30 .27 2.1 17400 13100 4150 1030 582 146 15 9.6 5.5 4.3 3.8 4.7 7.1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 370 300 277 232 204 196 216 200 212 196 212 244 236 208 176 144 124 108 98 101 86 74	MEAN CONCER TRAFILDN (MG/L)  140 141 145 120 528 270 135 181 183 163 1641 293 515 279 232 215 120 117 128 109 92	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 157 110 84 40 34 34 34 329 21 31	DI SCHARGE (CFS)  86 66 66 66 66 51 63 61 56 40 36 29 25 19 16 14 17 14 12 12 12 11	MEAN CONCENTRATION (MG/L) 35 30 32 32 31 12 9 10 5 5 5 12 9 8 13 14 7 7 7 6 6 8 8	DISCHARGE (TONS/DAY)  8-1 5-3 5-7 5-7 5-7 5-7 1-5 1-6 -76 -54 1-2 -70 -54 -67 -60 -26 -32 -23 -19 -26 -30 -38	DISCHARGE (CFS)  12 11 9,4 10 11 40 485 321 155 92 77 58 46 36 38 36 38 36 36 37 31	MEAN CONCENTRATION (MG/L)  6 14 22 111 9 11500 15100 2000 15100 4150 2000 930 132 155 94 8 73 55 49 60	OISCHARGE (TONS/DAY) . 19 . 42 . 56 . 30 . 27 2.1 17400 13100 4150 1030 582 146 15 9.6 5.5 4.3 3.8 4.7 7.1 5.2 4.1 5.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21 22 22	DISCHARGE (CFS)  370 302 272 232 204  196 216 200 212 244 236 208 176  144 124 108 98 101 866 74	MEAN CONCENTRATION (MG/L)  140 141 145 120 528 270 135 181 183 163 144 293 515 279 232 215 120 117 128 105	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 157 110 84 40 34 29 21 31	DI SCHARGE (CFS) 86 66 66 66 66 51 53 61 56 40 29 25 19 16 14 17 14 12 12	MEAN CONCENTRATION (MG/L) 35 30 32 32 31 12 9 10 5 5 5 5 12 9 8 8 13 14	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.5 1.7 1.5 1.6 -76 -54 1.2 -70 -54 1.2 -70 -54 1.2 -70 -54 -67 -60 -26 -23 -19 -26 -26 -30	DISCHARGE (CFS)  12 11 9,4 10 11 40 485 321 155 92 77 58 46 36 36 36 36 36 36 36 36	MEAN CONCENTRATION (MG/L)  6 14 22 11 19 1500 15100 9910 4150 2800 930 132 155 94 57 42 39 48 73 55 49	OISCHARGE (TONS/DAY) .19 .42 .56 .30 .27 .2.1 17400 13100 4150 1030 582 146 115 .9.6 5.5 .3 .3 .8 .4 .7 .7 .1 5.2 .4.1
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS)  370 302 272 232 204  196 216 200 212 244 236 208 176  144 124 108 98 101 86 74 68	MEAN CONCENTRATION (MG/L)  140 141 145 120 528 270 135 181 183 163 141 293 515 279 232 215 120 117 128 105	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 157 110  84 40 34 29 21 31 16 9.6	DI SCHARGE (CFS)  86  66  66  66  66  51  56  40  36  29  25  19  14  17  14  12  12  12  11  14  14	MEAN CONCENTRATION (MG/L) 35 30 32 32 31 12 9 10 5 5 5 12 9 8 8 13 14	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.7 5.5 1.6 -76 -26 -26 -32 -23 -19 -26 -26 -30 -38 -26 -15	DISCHARGE (CFS)  12 11 9,4 10 11 40 485 321 155 92 77 58 46 36 36 36 36 36 36 37 31 31 29 29	MEAN CONCENTRATION (MG/L)  6 14 22 11 9 1900 15100 9910 4150 2800 132 155 94 57 42 39 48 73 55 49 60 74 33	OISCHARGE (TONS/DAY) .19 .42 .56 .30 .27 .2.1 17400 13100 4150 1030 582 146 15 .5.5 .4.3 3.8 3.7 .7.1 5.2 .4.1 5.0 5.8 2.6
1 2 3 4 5 6 7 7 8 8 9 10 11 12 13 114 15 16 17 18 19 20 21 22 32 24 25 26 27	DISCHARGE (CFS)  370 302 272 232 204  196 216 200 212 244 236 218 176  144 124 108 98 101 86 67 68 68	MEAN CONCER TRAFTION (MG/L)  140 141 145 120 528 120 135 183 163 163 164 293 215 120 127 128 187 128 187 128 187 128 187 128 128 128 128 128 128 128 128 128 128	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 157 110  84 40 34 34 29 21 31 16 6-2 9-2 12	DI SCHARGE (CFS)  86  66  66  66  66  51  53  61  56  40  36  29  29  19  14  17  14  12  12  12  11  14	MEAN CONCENTRATION (MG/L)  35	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.7 5.5 1.7 1.5 1.6 -76 -76 -70 -54 1.2 -70 -54 -60 -26 -32 -23 -19 -26 -30 -38 -26 -15 -16 -18	DISCHARGE (CFS)  12 11 9,4 10 11 40 485 321 155 92 77 58 46 36 38 36 36 36 37 31 31 29 29 29	MEAN CONCENT AT 10 MEAN (MG/L)  6 14 22 11 9 19 1500 15100 2910 4150 2910 41	OISCHARGE (TONS/DAY) .19 .42 .56 .30 .27 .2.1 17400 13100 4150 1030 582 146 15 .5.5 .4.3 3.8 4.7 7.1 5.0 5.8 2.6 1.5 1.6
1 2 3 4 5 6 7 7 8 8 9 10 11 12 13 114 15 167 118 12 20 21 22 32 24 25 26 27 28 9	DISCHARGE (CFS)  370 302 272 232 204  196 216 200 212 244 236 218 176  144 124 108 98 101  86 67 68 68 68 68 68	MEAN CONCERT AT TION (MG/L)  140 141 145 12c 528 181 183 163 163 151 187 129 129 129 129 129 129 129 129 129 129	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 157 110  84 40 34 42 9 21 31 16 6-2 9-2 12 11	DI SCHARGE (CFS)  86 66 66 66 66 51 63 61 56 40 36 29 19 16 14 17 14 12 12 12 11 14 14 14 14 18 17	MEAN CONCENTRATION (MG/L)  35 30 32 32 31 12 2 9 10 5 5 5 12 9 8 13 14 7 7 7 6 6 8 8 8 10 10 7 7 4 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.7 5.5 1.6 -76 -76 -76 -76 -70 -54 -70 -54 -70 -70 -70 -70 -70 -70 -70 -70 -70 -70	DISCHARGE (CFS)  12 11 9,4 10 11 40 485 321 155 92 77 58 46 36 36 36 36 36 37 31 31 29 29 29 29 29 28 25	MEAN_CONCENT   1	OISCHARGE (TONS/DAY) .19 .42 .56 .30 .27 .2.1 17400 13100 4150 1030 582 146 15 .5.5 .4.3 3.8 4.7 7.1 5.0 5.8 2.6 1.5 1.6 1.4 1.1 1.1
1 2 3 4 5 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30	DISCHARGE (CFS) 370 3002 272 232 204 196 216 200 212 196 212 244 236 208 176 144 124 108 98 101 86 74 68 66 68 68 68	MEAN CONCERT TRAFILON (MG/L)  140 141 145 120 528 270 135 181 183 163 163 163 163 163 163 163 163 163 16	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 157 110  84 40 34 34 34 34 39 29 21 31 16 9.6 6.2	DISCHARGE (CFS)  86  66  66  66  51  51  51  52  12  12  12  11  14  14  14  17  18  17  18  19  10  10  11  11  11  12  12  11  11  12  12	MEAN CONCENTRATION (MG/L) 35 30 32 32 31 12 9 10 5 5 5 12 9 8 8 13 14 7 7 7 6 6 8 8	DISCHARGE (TONS/DAY)  8-1 5-3 5-7 5-7 5-7 5-5 1-7 1-5 1-6 -76 -54 1-2 -70 -60 -26 -32 -33 -19 -26 -30 -38 -26 -15 -16 -18 -18	01 SCHARGE (CFS) 12 11 9,4 10 11 40 485 321 155 92 77 58 46 36 38 36 36 36 36 36 37 31 31 29 29 29 29	MEAN CONCENTRATION (MG/L)  6 14 22 111 9 11500 15100 15100 15100 15100 15100 155 94 45 7 42 39 48 73 73 75 56 60 74 74 74 75 75 75 75 75 75 75 75 75 75 75 75 75	OISCHARGE (TONS/DAY) . 19 . 42 . 56 . 30 . 27 2.1 17400 13100 4150 1030 582 146 15 . 9 . 6 . 5.5 . 4.3 3 . 8 4.7 7.1 5.2 4.1 5.0 5.8 2.6
1 2 3 4 5 5 6 7 7 8 9 9 1 C 1 1 1 2 1 1 4 1 5 1 6 1 7 1 8 9 2 0 2 2 2 2 3 2 2 5 2 6 6 2 7 8 2 9 3 0 3 1 1	DISCHARGE (CFS)  370 302 272 232 204  196 216 200 212 2196 2196 212 244 236 208 176 144 124 108 98 101 86 67 68 68 68 77 77 98	MEAN CONCERT TRAFILON (MG/L)  140 141 145 120 528 270 135 181 183 163 163 163 163 163 163 163 163 163 16	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 3157 110 84 40 34 29 21 31 16 9.6 6.2 12 11 10 10	DISCHARGE (CFS)  86  66  66  66  51  63  63  640  36  29  25  19  16  14  17  14  12  12  12  11  14  14  14  14  15  17  18  19  10  11  11  11  12  12  11  11  12  12	MEAN CONCENTRATION (MG/L) 35 30 32 32 31 12 9 10 5 5 5 12 9 8 8 13 14 7 7 7 6 6 6 8 8 10 10 10 10 10 10 10 10 10 10 10 10 10	DISCHARGE (TONS/DAY)  8.1 5.3 5.7 5.7 5.7 5.5 1.6 -76 -76 -54 1.2 -70 -54 -67 -60 -26 -32 -23 -19 -26 -30 -38 -26 -31 -31 -31 -30 -41	DISCHARGE (CFS)  12 11 9,4 10 11 40 485 321 155 92 77 78 46 36 38 36 36 36 36 37 31 31 32 29 29 29 29 29 29 28 25 28	MEAN_CONCENT   1	OISCHARGE (TONS/DAY) .19 .42 .56 .30 .27 .2.1 17400 13100 4150 1030 582 146 15 .5 .5 .4 .3 3.8 4.7 7.1 5.0 5.8 2.6 1.5 1.5 .8 2.6 1.1 1.3
1 2 3 4 5 5 6 7 7 8 9 10 11 112 113 114 115 116 117 118 120 21 22 23 25 26 27 28 29 30 31 TOTAL	DISCHARGE (CFS)  370 302 272 232 204  196 210 212 196 212 244 236 208 176  144 124 108 98 101 86 67 74 68 68 77 80 77	MEAN CONCENT AND I MADE AND I MAD	DISCHARGE (TONS/DAY)  140 115 106 75 291  143 79 98 105 86 81 193 328 328 157 110  84 40 34 29 21 31 16 9.6 6.2 9.2 12 11 10 11 2476.0	DISCHARGE (CFS)  86  66  66  66  51  51  51  52  12  12  12  11  14  14  14  17  18  17  18  19  10  10  11  11  11  12  12  11  11  12  12	MEAN CONCENTRATION (MG/L) 35 30 32 32 31 12 9 10 5 5 5 12 9 8 8 13 14 7 7 7 6 6 6 8	DISCHARGE (TONS/DAY)  8-1 5-3 5-7 5-7 5-7 5-5 1-7 1-5 1-6 -76 -54 1-2 -70 -54 -67 -60 -26 -32 -19 -26 -30 -38 -26 -15 -16 -18 -14 -13 1-0	DISCHARGE (CFS)  12 11 9,4 10 11 40 485 321 155 92 77 58 46 36 36 36 36 36 37 31 31 29 29 29 29 29 28 25	MEAN CONCENTRATION (MG/L)  64 22 11 9 11500 15100 15100 15150 2800 9300 132 155 94 45 57 42 39 48 73 73 19 20 18 16 16 17	OISCHARGE (TONS/DAY) .19 .42 .56 .30 .27 .2.1 17400 13100 4150 1030 582 146 15 .5.5 .4.3 3.8 4.7 7.1 5.0 5.8 2.6 1.5 1.6 1.4 1.1 1.1

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)
88227-1
486923-09

# 09226000 HENRYS FORK NEAR LONETREE, WYO.

LOCATION.--Lat 41°00'23", long 110°16'13", in NE<sup>1</sup>/<sub>2</sub>SE<sup>1</sup>/<sub>2</sub>NW<sup>1</sup>/<sub>2</sub> sec.21, T.12 N., R.114 W., Uinta County, at gaging station 0.6 mile downstream from Wasatch National Forest boundary, 1 mile downstream from West Fork, 1.5 miles downstream from Utah-Wyoming State line, and 7 miles southwest of Lonetree.

DRAINAGE AREA. -- 56 sq mi, approximately.

PERIOD OF RECORD .-- Chemical analyses: August 1969 to September 1970.

## CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCD3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SD4) (MG/L)	CHLO- RIDE (CL) (MG/L)
AUG 1969												
27 NOV.	1145	18	5.0		12	1.7	2.1	.8	46	0	4.2	• 9
22	0915	9.8	7.1	80	21	4.7	3.4	• 6	87	0	12	2.2
JUN 1970 07 JULY	1500	180	4.4	160	7.0	1.6	1.0	.4	28	0	•6	• 5
13	1500	A66	3.6	150	5.5	1.5	1.3	•6	26	0	.4	• 5

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO
AUG 1969 27	.1	•1	10	50	.07	2.43	37	0	.2
NOV. 22 JUN 1970	.1	.1	10	94	•13	2.54	72	1	• 2
07 JULY	.1	• 3	30	30	• 05	18.5	24	1	•1
13	.1	.0	10	27	- 06	8.20	20	0	.1

A DAILY MEAN DISCHARGE

#### FIELD DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED OXYGEN (MG/L)	PH (UNITS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
AUG 1969 27 NOV.	1145	18	7.6	8.3	85	14.5
22 JUN 1970	0915	9.8	10.2	8.3	45	1.0
07 JULY	1500	180	9.4	8.7	36	7.5
13	1500	A66	8.0	8.6	41	17.5

A DAILY MEAN DISCHARGE.

#### 09228500 BURNT FORK NEAR BURNTFORK, WYO.

LOCATION. --Lat 40°56'50", long 110°04'20", in SE<sup>1</sup>4 sec.36, T.3 N., R.16 E., Summit County, Utah, Ashley National Forest, at gaging station 0.8 mile west of forest boundary and 7 miles southwest of Burntfork.

DRAINAGE AREA. -- 52.8 sq mi.

PERIOD OF RECORD. -- Chemical analyses: August 1969 to May 1970 (discontinued).

CHEMICAL ANALYSES, AUGUST 1969 TO MAY 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SDDIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
AUG 1969												
27 NDV.	0915	14	3.4		3.2	1.0	1.0	• 4	14	0	4.4	• 4
21	1615	5.0	3.9	10	3.9	2.6	1.3	.5	19	D	4.2	•6
MAY 1970 09	1100	12	4.3	120	5,5	1.1	1.4	.4	22	0	3.0	1.2
DATE	DIS- SOLVED FLUD- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SDLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
AUG 1969												
27	.0	.0	10	21	•03	.83	12	1	-1			10.0
NOV. 21	.1	.4	0	26	.04	.38	20	4	-1			0.5
MAY 1970	.1	.2	0	28	•05	1.23	18	0	.1			1.0

## FIELD DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED DXYGEN (MG/L)	PH (UNITS)	TEMPER- ATURE (DEG C)
AUG 1969 27	0915	14	25	8.9	в.0	10.0
NOV. 21	1615	5.0	56	9.9	8.3	0.5
MAY 1970 09	11D0	12	45	10.9	8.5	1.0

## 09229500 HENRYS FORK AT LINWOOD, UTAH

DRAINAGE AREA, -- 520 sq mi-

PERIOD OF RECORD, --Chemical analyses: March 1951 to September 1969 (monthly), October 1969 to September 1970 (monthly).

Water temperatures: March 1951 to September 1970.
Sediment records: October 1968 to September 1969 (miscellaneous).

EXTREMES . -1969-70:

Specific conductance: Maximum daily, 1,750 micromhos Aug. 24, 25, 29; minimum daily, 430 micromhos June 3. Water temperatures: Maximum, 25.0°C Aug. 16; minimum, freezing point Jan. 6.

Period of record:
Dissolved solids (1951-69): Maximum, 3,700 mg/l Oct. 14, 15, 1961; minimum, 29 mg/l June 9-21, 1968.
Hardness (1951-69): Maximum, 2,100 mg/l Oct. 14, 15, 1961; minimum, 200 mg/l June 9-21, 1968.
Specific conductance: Maximum daily, 3,750 micromhos Oct. 15, 1961; minimum daily, 385 micromhos June 16,

water temperatures: Maximum, 29.0°C July 29, 1968; minimum, freezing point on many days during winter periods.

REMARKS.--Maximum observed: Specific conductance, 1,810 micromhos Nov. 21 (field measurement). Prior to October 1969 samples collected 1 mile downstream from gaging station.

DATE	TIME	DIS- CHARGE (CFS)	SILICA (S102) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SDLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.									280	0	403	18
24	0800	85	18	300	120	62	60	9.1	200	U	403	
NOV.							55	11	300	0	552	22
21	1415	46	39	20	205	53	99	11	,,,,	•		
DEC .					160	72	47	9.6	311	0	532	22
02	0830	48	1.8			80	58	8.8	298	ŏ	574	24
03	0815	46	21		156	BO	26	0.0	270	·		
JAN.						84	59	9.3	331	0	548	26
07	0810	33	18		170		66	8.3	328	ŏ	636	26
11	1200	32	20	30	180	91	00	6.3	320	•	0,00	
FEB.					148	77	51	8.1	299	0	498	25
04	0830	45	15	10		64	48	9.1	275	ŏ	428	19
09	1215	54	17	10	132	04	40	701	2.13	•		
MAR.					132	67	46	7.5	28D	0	435	22
03	0815	102	14			62	48	7.4	263	ő	443	20
07	1500	59	18	100	128	62	40	1.4	203	•		
APR.					• • • •	27	32	11	197	0	250	12
08	0815	193	13		104		32	5.2	234	ŏ	227	15
09	1130	82	15	20	85	36	28	8.4	228	ŏ	203	15
09	1330	107	16	140	В2	33	20	0.4	220	٠	203	•
MAY							35	6.B	294	0	242	16
06	0730	90	14		95	44	32	5.2	234	ŏ	227	15
07	1130	82	15	20	85	36	32	3.2	2.54	•		
JUNE						• .	• •	4.4	155	0	90	8.0
05	0730	310	13		51	16	14		164	ő		4.8
05	1500	325	16	50	54	19	14	4.5	104	U	103	7.0
JULY									295	0	325	23
11	1130	204	22	260	120	52	42	8.7	293	U	363	
AUG.									256	0	620	22
06	1200	54	24	70	156	84	62	9.6	236	U	620	
SEP.									243	0	664	23
03	1430	35	26	60	165	87	68	11	243	U	J04	23

GREEN RIVER BASIN

# 09229500 HENRYS FORK AT LINWOOD, UTAH--Continued

# CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	DIS- SOLVED FLUO- RIDE	NITRATE	DIS- SOLVED BORON	DIS- SOLVED SOLIDS (SUM DF CONSTI-	DIS- SOLVED SOLIDS (TONS	DIS- SOLVED SOLIDS (TONS	HARD- NESS	NON- CAR- BONATE HARD-	SODIUM AD- SORP- TION	SPECI- FIC CDND- UCTANCE	PH	TEMPER-
	(F)	(NO3)	(B)	TUENTS)	PER	PER	(CA.MG)	NESS	RATIO	(MICRO-	rn.	ATURE
DATE	(MG/L)	(MG/L)	(UĞ/L)	(MG/L)	AC-FT)	DAY)	(MG/L)	(MG/L)	KATIO	MHOS)	(UNITS)	(DEG C)
OCT.												
24 NDV.	.5	•2	160	829	1.09	184	558	328	1.1			3.5
21	.5	-1	200	1090	1.54	140	729	483	.9			0.5
DEC.												
02	.4	-1	230	1020	1.47	111 133	716	461	-8			0.0
03 Jan.	• 5	.1	0	1070	1.46	133	720	476	.9	1380	7.9	0.0
07	.6	.1	0	1080	1.47	96	770	499	.9	1400	7.6	0.0
11	.5	•1	250	1190	1.71	105	823	554	1.0			0.0
FEB.												
04	.7	.4	0	970	1.32	118	685	440	. 8	1330	7.6	0.0
09	. 4	•0	170	853	1.18	126	592	366	.9	1180	8.2	1.0
MAR.												
03	.6	•2	0	863	1.30	263	605	375	.8	1200	7.6	0.0
07	1.5	-1	140	857	1.19	139	574	358	.9			3.0
APR.												
08	-4	6.8	0	554	.81	312	369	208	• 7	827	7.8	4.0
09	.8	.9	90	532	•79	128	360	168	.7	725	8.3	12.0
09	.8	•6	100	499	.68	145	340	153	.7	724	7.9	9.0
MAY	_	_	_						_			
06	• 5	• 7	0	599	.84	151	417	176	• 7	862	8.1	
07 JUNE	.8	•9	90	532	.79	128	360	168	.7			12.0
05	,	-	0	273		248	192	65		430		12.0
05	.4	.2	90	273	• 4D	248 274		65 77	• 4	428	8.0 7.8	
JULY	• •		90	291	• 42	214	212	"	- 4	462	1.0	18.5
11	.4	.0	210	739	1.06	427	514	272	.8			21.5
AUG.	• •		210	137	1.00	421	214	212	• •			21.0
06	.6	•2	290	1100	1.62	174	734	524	1.0	1470	8.1	21.0
SEP.	•0	• •	2 70	1100	1.02	114	1.54	J. 4	1.0	1410	0.1	21.0
03	•6	.0	280	1160	1.66	115	769	570	1.1			20.5

## FIELD DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHDS)	PH (UNITS)	DIS- SOLVED DXYGEN (MG/L)	TEMPER- ATURE (DEG C)
OCT.						
24	0800	85	1110	8.5	10.2	3.5
NOV.	1415	46	1810	8.6	10.9	0.5
21 DEC.	1415	40	1010	0.0		0.0
02	0830	48	1320	8.3	10.3	0.0
JAN.						
11	1200	32	1640	8.3	10.4	0.0
FE8. 09	1215	54	1140	8.3	10.8	1.0
MAR.	1217	24	1140		•	
07	1500	59	1480	8.4	10.3	3.0
APR.						
09	1330	107	748	8.3	9.2	9.0
MAY 07	1130	82	725	8.3	8.9	12.0
JULY		02	,,,			
11	1130	204	940	8.3	8.3	21.5
AUG.				8.1	7.4	21.0
06 SEP.	1200	54	1470	8.1	1.4	21.0
03	1430	35	1430	8.3	8.6	20.0

# 09229500 HENRYS FORK AT LINWOOD, UTAH--Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	DCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1660	1110	1440	1380	1260	1240	1090	1110	461	891	1270	1440
2	1710	1200	1440	1390	1240	1120	1230	1010	431	934	1340	1660
3	1590	1200	1370	1370	1220	1070	1160	933	430	985	1410	1540
4	1560		1400	1440	1200	1150	1160	947	432	1020	1460	1630
5	1580	1190	1370	1370	1170	1230	952	876	434	1070	1480	868
-	1,000		13.0	13.0	****	1230	7,72	010	404	1070	1400	000
6	1540	1190	1400	1430	1210	1380	955	938	488	942	1740	860
7	1520	1180	1530	1470	1090	1200	938	786	586	1100	1610	1100
8	1410	1180	1530	1520	1080	1080	800	764	600	1010	1470	1220
9	1400	1450	1540	1530	1080	1080	932	838		1140	1530	1300
10		1450	1380	1550	1090	1070	757		803	1100	1540	1350
				2,,,,	-070	-0.0	• • • •		003			1370
11	1420	1220	1530	1260	1020	1170	752	871	770	991	1560	1480
12		1200	1530	1460	1000	1140	1020	921	736	936	1610	1420
13	1410	1180		1440	1000	1380	1030	921	778	1030	1610	1480
14	1440	1220	1380	1320	1010	1210	1110	899	798	1200	1610	1460
15	1480	1270	1360	1350	1050	1200		845	786	1210	1600	1450
•	•		1300	1370	20,0	1200		047	140	1210	1000	1470
16	1400	1250	1360	1220	1080	1150	1060	866	807	1240	1620	1480
17	1250	1290	1370	1220	1170	1100	1170	840	832	1260	1610	1490
18	1220	1350	1310	1230	1100	1090	1140	779	832	1230	1670	1490
19			1370	1220	1190	1110	946	712		1300	1690	1500
20	1200		1310	1220	1170	1280	1180	544	830	1290	1670	1470
											20.0	
21	1130	1350	1530	1250	1160	1300	1210	537	738	1230	1700	1560
22	1490		1300	1170	1180	1150	1190	537	668	1630	1720	1620
23	1110	1440	1320	1240	1110	1210	1140	578	662	961	1710	1610
24	1140	1440	1250	1250	1160	1210	1260	584	665	1050	1750	1580
25	1140	1410	1520	1170	1130	1000	1180	580	688	1140	1750	1580
						1000		,,,,	•••	1140	1.50	1,00
26	1480	1430		1390	1210	1020	1060	535	706	1160	1740	1570
27	1230	1370		1120	1120	1070	952	497	722	1160	1720	1580
28	1230	1330		1100	1120	1130	898		729	1190	1560	1560
29	1210	1390	1430	1200		1270	1000	436	744	1140	1750	1560
30	1500	1430	1400	1310		1030	1100	440	810	1270	1620	1560
31	1240		1420	1240		1120		439		1240	1610	
AVG	1380	1300	1410	1320	1130	1160	1050	744	677	1130	1600	1450

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	007	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ı	17.0		1.5	0.5	1.0	2.0	4.5	10.5	17.0	20.0	22.5	17.5
;	11.0		1.5	1.5	1.5	3.0	7.0	13.0	17.5	22.0	23.5	17.5
2	11.0		1.5		1.5	1.0	6.5		15.0	23.5	24.0	18.0
4	8.5		2.0		2.0	2.0	8.0	16.0		20.0	23.0	16.0
5	5.5		2.0	1.0	2.0	3.0	8.0	15.0	16.0	19.5	22.5	16.0
6	6.0		1.5	0	2.0	2.5	8.0	14.5	15.5	17.0	17.0	8.0
7	11.0	6.0		1.0	2.0	2.5	8.5	12.0	15.0	20.0	22.5	14.0
B	10.0	6.0		1.0	2.0	2.5	7.5	14.0	15.0	22.5	23.0	17.0
9	10.0	6.5	1.0	1.0	2.0	4.0		11.5		22.0	22.0	16.0
10		6.5	2.0	1.0	2.0	2.0	7.0		7.5	21.5	22.5	17.0
11	9.0	6.5	2.0	1.0	2.0	2.5	7.0	12.5	7.0	18.0	22.0	15.0
12		5.0	3.0	1.5	2.0	3.0	7.0		7.0	19.5	20.0	15.0
13	3.5	5.0	2.5	1.0	0.5	3.0	6.5	13.5	7.5	22.0	18.0	16.0
14	4.0	6.0	3.0		0.5	3.5	6.0	17.0	15.5	23.0	20.0	10.0
15	5.0	6.0	2.0	1.0	0.5	6.0		16.0		23.5	21.5	12.5
16	8.0	4.5		1.0	2.0	6.5	7.5	15.5	14.0	18.0	25.0	14.0
17	6.5	1.5	2.0	1.0	1.5	6.0	7.0	18.0	13.0	20.0	20.0	14.5
18		4.0	2.0	1.0	1.0	6.0	8.0	21.5	15.0	18.0	19.0	15.0
19			3.0	1.0	1.5	3.5		19.0		17.5	17.0	15.0
20	9.5		2.5	1.0	1.5	4.5	8.5	16.0	18.5	22.5	17.0	12.0
21	8.5	2.0	2.5	1.0	1.0	5.5	8.0	14.5	21.5	18.0	18.5	10.0
22	8.5		2.5	1.0	2.0	8.0	6.0	15.0	21.0	16.0	18.0	12.0 12.0
23	8.5	2.0	3.0	1.0	2.5	7.0	8.0	13.0	22.0	17.0	21.0	
24	8.5	1.5	2.0	1.0	2.0	8.0	10.0	12.5		18.0	20.0	12.0
25	9.0	1.0	2.0	1.0	2.0	5.5	11.0	17.5	23.0	16.5	20.0	11.0
26	9.0	1.0		1.0	2.0	4.0	10.0	18.0	23.0	15.0	18.0	11.0 12.5
27	9.0	1.0		2.0	2.5	4.0		15.0	21.0	20-0	17.0	12.5
28		1.0		2.0	3.0	2.5	5.5		22.5	18.0	17.0 17.0	12.5
29		1.5	2.0	1.5		4.0	8.0	15.5	20.0	19.0	17.5	12.5
30		2.0	2.0	1.5		4.0	8.5	16.0	19.0	20.0 21.0	18.0	12.5
31			2.0	1.0		5.0		14.0		21.0		
AVG			2.0	1.0	1.5	4.0	7.5	15.0	16.5	19.5	20.0	14.0

# 09234500 GREEN RIVER NEAR GREENDALE, UTAH (Irrigation network station)

LOCATION. -- Lat 40°54'30", long 109°25'20", in NW 18E1 sec.15, T.2 N., R.22 E., Daggett County, Ashley National Forest, at gaging station 0.5 mile downstream from Flaming Gorge Dam, 2 miles south of Dutch John, 4 miles northeast of Greendale, 13 miles southeast of Linwood, and 407.0 miles from mouth.

DRAINAGE AREA, -- 15,100 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: October 1956 to September 1969 (daily), October 1969 to September 1970

(monthly).

Water temperatures: October 1956 to September 1959, October 1963 to September 1970.

Sediment records: October 1956 to September 1959.

EXTREMES. -- 1969-70:

Period of record (See REMARKS below):
Dissolved solids (1956-58, 1959-69): Maximum, 866 mg/l Mar. 18-23, 1961; minimum, 236 mg/l June 1-30, 1961.
Hardness (1956-58, 1959-69): Maximum, 424 mg/l Dec. 1-9, 1960; minimum, 145 mg/l June 1-30, 1961.
Specific conductance (1956-58, 1959-62): Maximum daily, 1,340 micrombos Aug. 30, 1961; minimum daily, 325 micrombos June 2, 1961.
Specific conductance (1964-70): Maximum daily, 962 micrombos Aug. 30, 1965; minimum daily, 606 micrombos Nov. 14, 22, 1963, Feb. 10-19, 1964.
Water temperatures (1956-59): Maximum, 24.0°C July 24, 25, 1959; minimum, freezing point on many days during winter periods.
Water temperatures (1964-70): Maximum, 14.0°C Nov. 11, 1963; minimum, 2.0°C on several days in 1964. Water temperatures (1964-70): Maximum, 14.0°C Nov. 11, 1963; minimum, 2.0°C on several days in 1964.

REMARKS.--Storage in Flaming Gorge Reservoir began on Nov. 1, 1962. Extremes are given above for two separate periods--1956-62, and 1964-70. Extremes for the 1963 water year (October 1962 to September 1963) are not included.

			•		D15-	DIS- SOLVED	TEAN GETGE	. 2,0, .0	oci iciibu	. 2770			018-
DATE	TIME	DIS CHAR (CFS	GE (S	S LICA IC21	OLVED CAL- CIUM (CA) MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	SI UM	(HCO3)	CAR- BONATE (CO3) (MG/L)	SULFATE (SG4) (MG/L)	CHLO- RIDE (CL) (MG/L)	SDLVED FLUO- RIDE (F) (MG/L)
NOV 1969 24 DEC.	9930	350	00		55	26	51	2. 3	166	0	190	19	
JAN 1970	133)	423	30	4. C	56	22	56	2.6	168	o	187	18	•2
J7 FEB.	1100	412	20	3.9	59	25	52	2.5	188	0	188	20	•5
04 MAR.	1200	80	04	4.0	60	23	53	2-6	177	0	192	18	•3
63 APR.	1130	8	57	4.0	61	23	53	2.6	179	0	200	18	•3
08 MAY	1200	423	30	4.3	64	24	59	2.7	181	0	204	18	.3
06 JUNE	1930	216	80	4.3	62	24	61	2. 6	186	0	198	19	-4
U5	10 30	44	40	3.4	60	25	58	2.5	176	2	200	18	-4
AUG.	1000	273	30	4.2	61	24	61	2.5	185	0	167	19	.3
04	1000	207	70	4 • 2	62	24	58	2.8	182	2	1 96	18	-7
DATE	- (	RATE N) G/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SCLIDS (RFSI- DUE AT 180 C) (MG/L)	SOLIC (SUM C CONSTI TUENTS	D DI S SOL F SOL - (TO		D HARD- S NESS (CA,MG	HARD~ ) NESS	E SOR TI RAT	D- FI P- CON ON UCTA TO (MIC	ID- INCE IRO-	PH (ITS)
NDV 1 24 CEC.				465	42	.5	. 63 439	24	2 10	6	1.4	694	7.5
03 JAN 1	970		110	457	4:	37	•62 522	0 23	8 10	0	1.6	687	7.5
J7			80	468	44	6	.64 521	0 25	2 9	8	1.4	697	7.6
€4 MAR.			130	455	44	2	. 62 98	B 24	2 9	7	1.5	686	7.8
L3	•		100	464	4!	3	.63 107	0 24	8 10	1	1.5	702	8 •D
C8	•		90	498	1 46	8	<b>.68</b> 569	0 25	8 10	9	1.6	727	8.0
C6	•		70	491	. 40	<b>54</b>	.67 289	0 25	4 10	7	1.7	729	8.0
(5	•		70	513	45	59	<b>.70</b> 50	9 25	2 10	4	1.6	730	8.5
≎1 AUG.	••	•70	111	484	4	33	.66 357	0 25			1.7	715	8.2
C4	••	- 72	90	480	40	o c	•65 268	0 25	3 10	1	1.6	712	8.4

# 09234500 GREEN RIVER NEAR GREENDALE, UTAH. -- Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	3C T	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ι	758	700	685				692	728	732	716		765
2	752	714	682	696	690	727	692		735	719		750
3	750	712	681		689	698	707		736		715	765
4	746	723	686		689	698		742	737		710	749
5	764	714	680	696	686	688		735	736		716	
6	754	719	680	688	694	700	732	730		717	720	
7	755	714	680	695			728	717		715	726	
8	752	711	683	693			736	720	729	711		771
9	752	702	685	695	691	700	734		731	715		745
10	752	704	688		685	712	739		729	711	722	745
11	148	694	690		691	715		736	733		733	749
12	746	708	689	695	689	715		741	726		733	
13	750	693	686	693	683	711	734	739		710	732	
14	747	688	681	693	~		732	740		708	738	749
15	745	688	679	693			732	732	730	712		768
16	750	678	686	691	692	694	714	723	732	714		773
17	755	691	689		689	693	739		735	707	734	749
18		680	688		689	703		739	725		738	770
19		680	688	689	688	679		736	730		738	
20	744	693		689	688	721	710	732		715	732	
21	743	687		689			719			713	736	755
22	755	680	689	691			699	736	735	709		770
23	737	680	690	689	693	710	705	~	733	713		744
24	743	688	687		669	695	732		728	720	738	743
25	734	694				686		735	725		751	748
26	731	691		686	695	702		731	722		747	
27	731	683		684	705	719	726	739		713	756	
28	734	687		687			726	732		713	741	755
29	702	688	692	684			728	~	723	714		762
30	716	688	683	687		727	703	~	720	714		754
31	726		690			692				714	747	
AVG	744	696	685									

# TEMPERATURE (°C) DF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	00.1	VOV	nec	JAN	FFB	MAR	APR	MAY	NUL	JUL	AUG	SFP
ı	9.0	11.0	9.0				4.5	4.5	4.5	5.5		8.0
2	9.0	11.0	9.0	6.5	4.0	4.0	4.5		4.5	5.5		8.0
3	9.0	11.0	9.0		4.0	4.0	4.5		4.5		6.0	9.0
4	9.5	10.0	9.)		4.0	4.0		4.5	4.5		6.0	8.0
5	9.0	10.0	9.1	5.5	4.0	4.0		4.5	4.5		6.0	
6	9.0	10.0	8.1	5.5	4.0	4.0	4.5	4.5		5.5	6.5	
7	9.0	10.0	9.0	5.5			4.5	4.5		5.5	6.5	
R	9.5	10.0	8.J	5.5			4.5	4.5	4.5	5.5		8.0
9	9.5	10.5	8.3	5.5	4.0	4.0	4.5		5.0	6.0		8.0
19	9.5	10.5	6.0		4.0	4.0	4.5		5.0	6.0	6.5	8.0
11	9.0	19.5	۹.٥		4.0	4.5		4.5	5.0		7.0	9.0
12	9.5	10.5	9.0	5.5	4.0	4.5		4.5	5.0		7.0	
13	9.5	10.5	9.0	5.0	4.0	4.5	4.5	4.5		6.0	7.0	
14	9.5	10.5	8.9	5.0	~		4.5	4.5		6.0	7.0	8.0
15	9.5	10.5	٥.0	5.0			4.5	4.5	4.5	6.0		8.0
16	9.5	10.5	8.0	5.0	4.0	4.5	4.5	4.5	4.5	6.0		8.0
17	9.5	10.5	8.3		4.0	4.5	4.5		4.5	6.0	7.0	8.0
19		10.5	8.0		4.0	4.5		4.5	4.5		7.0	8.0
19		10.0	8.7	5.0	4.0	4.5		4.5	4.5		7.0	
20	9.5	10.0		5.0	4.0	4.5	4.5	4.5		6.0	7.5	
21	9.5	10.0		5.0			4.5			6.0	8.0	8.5
22	9.5	10.0	7.5	5.0			4.5	4.5	5.0	6.0		8.5
23	10.0	10.0	7.5	5.9	4.0	4.5	4.5		5.0	6.0		8.5
24	10.0	10.0	7.5		4.0	4.5	4.5		5.0	6.0	8.0	9.0
25	10.0	9.5			~	4.5		4.5	5.0		8.0	8.5
26	10.0	9.5		5.0	4.0	4.5		4.5	5.5		8.0	
27	10.0	9.5		5.0	4.0	4.5	4.5	4.5		6.0	8.0	
28	10.0	9.5		5.0			4.5	4.5		6.0	8.0	8.5
29	10.5	9.5	6.5	5.0			4.5		5.5	6.0		8.5
30	10.5	9.5	6.5	5.0		4.5	4.5		5.5	6.0		9.0
31	10.5		6.5			4.5				6.0	8.0	
AVG	9.5	10.0	8.0									

#### 09251000 YAMPA RIVER NEAR MAYBELL, COLO.

LOCATION. --Lat 40°32'20", long 108°05'18", Moffat County, at county bridge 1 mile north of Maybell and about 3.5 miles downstream from gaging station.

DRAINAGE AREA. -- 3,410 sq mi, approximately (at gaging station).

PERIOD OF RECORD. -- Chemical analyses: November 1950 to September 1969 (daily), October 1969 to September 1970 (Monthly).
Water temperatures: November 1950 to September 1970.
Sediment records: December 1950 to May 1958.

EXTREMES.--1969-70:
Specific codnductance: Maximum daily, 926 micromhos Mar. 31; minimum daily, 110 micromhos June 3.
Water temperatures: Maximum, 25.5°C Sept. 22, 25, 27, 30; minimum, 0.5°C on many days during December and January.

eriod of record: Dissolved solids (1950-69): Maximum, 656 mg/l Aug. 11, 1968; minimum, 64 mg/l June 13, 1964. Hardness (1950-69): Maximum, 384 mg/l Aug. 11, 1968; minimum, 43 mg/l June 1-21, 1959. Specific conductance: Maximum daily, 947 micromhos Sept. 24, 1955; minimum daily, 94 micromhos June 14, 1959. Water temperatures: Maximum, 29.5°C Aug. 5, 1963; minimum, freezing point on many days during winter periods.

	D1S-	TEMPER-	SILICA	CAL- CIUM	MAG- NE- SIUM	SDDLJM	PC- TAS- SIUM	BICAR- BONATE	SULFATE	CHLO- RIDE	FLUO- RIDE
DATE	CHARGE (CFS)	ATURE (DEG C)	(S102) (MG/L)	(CA) (MG/L)	(MG) (MG/L)	(NA) (MG/L)	(K) (MG/L)	(HCO3) (MG/L)	(SO4) (MG/L)	(CL) (MG/L)	(F) (MG/L)
NDV.	405	4.0	7.9	36	19	36	2.5	170	81	14	• 3
0EC.	341	2.D	9.3	45	21	45	2.1	209	93	20	.3
JAN. 06	325	0.0	11	43	22	45	2.4	210	104	18	•2
FEH.	411	0.5	9.4	50	23	50	2.9	210	132	18	.4
D3											
03 31 APR.	552 546	2.5	7.9 4.0	46 48	26 31	51 59	4.5 2.4	194 133	152 172	18 18	.3
28 MAY	4420	8.0	18	45	16	26	3.0	152	98	10	. 3
12	6630	10.0	9.3	29	8.4	9.8	2.1	110	32	4.2	• 2
09	8240	11.5	7.6	14	4.4	5.5	1.2	59	14	2.2	• 2
JULY 07 AUG.	3040	18.5	7.0	17	4.3	7.9	1.4	64	18	3.8	• 2
04	582 370	22.0 23.0	8.2 15	31 30	12 17	23 29	2.0 2.4	142 149	49 61	11 14	•3
SEPT.	261	15.5	2.0	33	13	32	2.3	153	69	16	•3
22	501	17.7	2.0		1,5	32	2.,	1,73	٠,	10	•,
OATE	NITRATE (NO3) (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	BORON (B) (UG/L)	OIS- SOLVED SOLIDS (RESI- DUE AF 180 C) (MG/L)	OIS- SOLVED SOLIDS (TONS PER AC-FT)	OIS- SOLVED SOLIDS (TONS PER OAY)	HARO- NESS (CA,MG) (MG/I)	NON- CAR- BONATE HARD- NESS (MG/L)	SOOTUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
NOV.	11107 27	(11072)	100/21	(110/2)	AC-FIT	DATE	(MO/E)	(MG/L)		nnus i	1041137
04 DEC.	•0	.01	9	296	.40	324	170	30	1.2	458	7.7
02 JAN.	• 0	.01	11	352	• 48	324	200	28	1.4	553	7.9
06 FEB.	1.0	.00	9	365	.50	320	201	29	1.4	563	7.7
03 MAR.	1.5	.05	6	408	• 55	453	220	48	1.5	643	7.4
D3	2.4	.26	9 7	413 454	•56 •62	616 669	221 247	62 78	1.5 1.6	628 696	8.0 8.6
APR. 28	3.8	•01	5	283	.38	3380	179	54	.8	427	7.7
MAY											
JUNE	1.9	•01	0	156	.21	2790	106	16	.4	242	7.8
JULY 09	.4	•02	4	89	.12	1980	54	6	.3	128	7.2
07 AUG.	• 2	-10	0	97	.13	796	60	8	• 4	153	7.5
04 24 SEPT.	:1 :1	.01 .D1	0	212 243	.29 .33	333 243	128 144	12 73	1.0	344 395	8.2 B.6
22	.2	.00	70	312	• 42	220	136	10	1.2	417	8.1

### 09251000 YAMPA RIVER NEAR MAYBELL, COLO, --Continued

			0925	1000 YAM	PA RIVER I	TEAR MAYB	ELL, COLO	Contin	16q			
	SPEC	IFIC COND	UCTANCE (	MICROMHOS	CM AT 25° CONCE-DAIL	C), WATE Y MEASUR	R YEAR OC EMENT)	TOBER 196	TO SEPT	MBER 197	0	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	441	559	5.30	509	654	765	751	352	121	268	392	411
2	442	560	550	509	636	769	749	355	122	250	436	413
3	371	560	550	503	647	707	607	263	110	350	437	410
4	482	561	547	506	636	705	699	265	141	235	416	412
5	462	562	550	505	650	708	556	231	116	337	418	410
6	438	562	547	505	648	708	706	289	130	352	395	412
7	436	562	542	505	650	708	707	266	136	344	411	468
8	543	563	549	509	651	708	707	183	146	349 324	416 447	472
10	440 439	561 559	546 549	513 511	651 649	707 710	708 712	214 157	147 140	323	447	469 <b>472</b>
11							706	152	225	382	446	470
	543	559	550	512	649	710			225	380	449	470
12 13	390	551	568	509 509	649 648	710 713	711 710	196 204	228	308	448	483
14	558	550 549	562 5 <b>6</b> 5	511	651	708	710	209	225	316	448	472
15	563 562	551	563	513	653	708	734	193	227	321	448	471
										220		. 72
16	560	551	562	513	646	689	736	178	226	370	448	472
17	563	549	568	509	760	704	736	168	226	329	448 448	470
18 19	562	551	567	511	764	724	736	166	228 226	328 430	448	470 471
20	564 559	551 550	566 565	514 511	765 768	720 718	735 735	163 147	124	433	448	484
							***	• • •	025		448	484
21	567	551	565	521	766	718	735	146 147	225	432 430	403	484
22	563	552	564	594	762	721	730		127			483
23	563	551	562	593	765	722	733 735	138	159 140	432 430	445 371	483
24 25	562	550 550	504 500	586 591	764 768	715 720	737	140 146	124	432	396	485
25	564			241	100							
26	556	553	502	627	766	721	708	135	124	432	403	483
27	454	550	502	621	761	752	705	138	115	432	403	367
28	479	556	499	620	765	739	440	151	223	432	403	451
29	556	556	498	660		746	335	145	227	432	402	413
30	560	555	501	657		709	334	137	128	432	402	387
31	554		504	659		926		135		435	403	
AVG	513	554	541	545	697	725	678	190	168	370	424	453
		7545		(°C) DF WA	TCD	. ve.n o		, a <b>TO</b> 550				
		1 EMP	PERATURE	(-C) UF WA	(ONCE-DAI			59 10 SEP	EMBER 19			
DAY	OCT	VOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	9.5	0.5	0.5	1.5	3.0	5.0	6.0	12.0	17.0		24.0
2	15.5	10.0	0.5	0.5	1.0	1.5	6.0	12.0	14.0	15.5	21.0	21.0
3	13.0	6.5	0.5	1.0	1.5	3.0	6.0	10.0	11.5	18.0	25.0	22.0
4	10.0	10.0	0.5	0.5	1.0	0.5	5.0	15.0	12.0	18.5	22.0	24.0
5	12.0	9.5	0.5	0.5	1.5	1.5	6.0	10.0	14.0	15.5	21.0	21.0
6	13.0	9.5	0.5	1.0	1.0	3.0	6.5	11.0	13.0	16.5	25.0	24.0
7	13.0	9.0	0.5	0.5	1.0	3.0	5.5	11.5	13.0	18.5	22.0	23.5
8	11.0	6.5	0.5	0.5	1.0	3.0	6.5	12.0	14.0	16.5	25.0	21.5
9	12.0	9.5	0.5	0.5	1.5	2.0	5.5	11.0	13.5	19.5	22.0	24.5
10	12.0	9.5	0.5	0.5	1.0	2.0	5.5	10.5	13.5	18.0	22.0	23.5
11	13.0	6.5	0.5	0.5	1.0	2.0	4 6	10.0	14.0	10 6	22.0	
12	11.5	9.0	0.5	0.5	1.0	2.0 3.5	6.5 6.0	10.0	14.0	19.5 19.5	22.0 25.0	22.0 24.5
13	12.0	9.0	0.5	0.5	1.0	3.5	5.5	11.0	14.0	17.0	21.0	23.5
14	11.0	9.0	0.5	0.5								
15	11.0	6.5	0.5	0.5	1.5 1.5	2.0	6.5 6.5	10.5	14.0	20.5 20.5	24.5 22.0	22.0 23.5
16	11.0											
17	11.5	5.5 4.5	0.5 0.5	0.5	1.5	3.5	5.5	11.5	15.0	16.5	24.5	24.5
18	10.0	3.5	0.5	0.5 0.5	2.0	3.5	6.5	13.0	14.0	21.0	22.0	23.5
19	11.0	3.0	0.5	1.0	1.5 2.0	3.5 4.5	5.5 6.5	10.5 13.0	15.0	21.0	24.5	23.0
20	10.0	3.0	0.5	1.0	2.0	4.5	6.0	13.0	14.0 14.0	18.0 21.0	22.0 24.5	25.0 23.5
	-		V• 2	•••		7.7	0.0	13.9	17.0	21.0	24.0	23.3
21	10 0	26										

13.0 12.0 12.0 11.5 14.5

13.0 13.5 12.0 14.5 12.0 14.5

11.7

6.0 5.5 8.5 6.5 6.0

6.0 6.5 6.0 7.0 7.0

6.1

14.0 14.5 15.0 15.0 14.0

15.5 13.5 15.0 14.5 15.5

13.9

18.0 21.0 21.0 18.5 18.5

21.0 19.0 21.0 22.0 19.5 20.0

18.9

24.0 24.5 21.0 25.0

24.5 21.0 25.0 21.5 24.5 24.5

23.2

24.0 25.5 23.5 23.5 25.5

24.0 25.5 23.5 24.0 25.5

23.6

10.0 9.5 10.0 10.0 9.5

8.0 9.5 10.0 6.5 10.0 6.5

11.0

AVG

3.5 3.0 3.0 2.0 2.0

3.0 2.0 3.0 2.0 3.0

5.8

0.5 0.5 0.5 0.5

0.5 0.5 0.5 0.5 0.5

0.5

1.0 1.5 2.0 2.0 1.5

1.5 1.0 1.0 1.0 0.5 0.5

0.8

1.5 3.0 1.5 3.0 1.5

2.0 3.0 1.5

1.5

3.5 4.5 3.5 4.5 5.0

4.5 5.5 5.0 6.0 5.0

3.4

### 09259700 LITTLE SNAKE RIVER NEAR BAGGS, WYO.

LOCATION. -- Lat 41°00'17", long 107°54'59", in SW 2 sec.18, T.12 N., R.94 W., Carbon County, at former gaging station 600 ft upstream from Wyoming-Colorado State line, 0.5 mile upstream from Scandinavian Wash, and 15 miles west of Baggs.

DRAINAGE AREA. -- 3,020 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: July 1965 to September 1970.

REMARKS.--Water discharge obtained from rating table for outside gage at sampling site defined by discharge measurements made at Little Snake River near Dixon (station 09257000), 9.2 miles upstream.

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS- SOLVED CAL+ CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BDNATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 24	1325	150	15	150	44	11	55	1.8	203	0	75	14
NOV.	1530	165	20	10	53	15	38	2.1	218	0	76	11
DEC.		85	19	0						0	78	12
01 JAN.	1300				56	17	40	2.3	240	_		
12 FEB.	1600	119	20	90	45	11	25	1.0	194	0	45	7.5
09 25	1645 1715	140 150	17 13	90	44 40	12 11	33 34	2.6 2.6	188 165	0	54 63	12 9.7
MAR. 24	1545	125	2.6		42	12	69	2.4	201	0	108	27
APR.	0845	160	15	40	55	18	37	3.2	201	0	118	10
MAY										_		
27 JUNE	1815	4800	12	120	18	4.1	6.2	2.1	68	0	14	2.8
24 JULY	1630	2750	11	140	15	3.3	5.8	1.0	64	0	14	1.3
14 AUG.	0830	300	13	110	33	8.6	23	2.0	141	0	38	15
26 SEP.	1340	11	2.1	30	49	27	189	4.5	247	6	288	98
23	1100	55	8.4	30	49	15	58	2.4	193	19	90	18
DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (ND3) (MG/L)	DIS- SDLVED BORON (B) (UG/L)	DIS- SOLVED SOLIOS (SUM DF CDNSTI- TUENTS) (MG/L)	DIS- SDLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON+ CAR- BONATE HARD- NESS (MG/L)	SODIUM AO- SDRP- TIDN RATIO	SPECI+ FIC CONO- UCTANCE (MICRO- MHOS)	PH {UNITS}	TEMPER- ATURE (DEG C)
OCT.	SOLVED FLUO- RIDE (F) (MG/L)	(ND3) (MG/L)	SDLVED BORON (B) (UG/L)	SOLVED SOLIOS (SUM DF CDNSTI- TUENTS) (MG/L)	SDLVED SOLIDS (TONS PER AC-FT)	SOLVED SDLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AO- SDRP- TIDN RATIO	FIC CONO- UCTANCE (MICRO-		ATURE (DEG C)
OCT. 24	SOLVED FLUO- RIDE (F) (MG/L)	(ND3) (MG/L)	SDLVED BORON (B) (UG/L)	SOLVED SOLIOS (SUM DF CDNSTI- TUENTS) (MG/L)	SDL VED SOLIDS (TONS PER AC-FT)	SOL VED SDLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AO- SDRP- TIDN RATIO	FIC CONO- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
0CT. 24 NDV. 20 DEC.	SOLVED FLUO- RIDE (F) (MG/L)	(ND3) (MG/L) •4	SDLVED BORON (B) (UG/L) 40	SOLVED SOLIOS (SUM DF CDNSTI- TUENTS) (MG/L)	SDL VED SOLIDS (TONS PER AC-FT)	SOL VED SOL IDS (TONS PER DAY) 128 155	NESS (CA,MG) (MG/L) 154	CAR- BONATE HARD- NESS (MG/L)	A0- SDRP- TIDN RATIO	FIC CONO- UCTANCE (MICRO- MHOS)	(UNITS)	7.0 0.5
OCT. 24 NDV. 20 DEC. 01	SOLVED FLUO- RIDE (F) (MG/L)	(ND3) (M6/L) .4 .2	SDLVED BORON (B) (UG/L) 40 50	SOLVED SOLIOS (SUM DF CONSTI- TUENTS) (MG/L) 317 323 343	SDLVED SOLIDS (TONS PER AC-FT) .43 .47	SOLVED SOLIDS (TONS PER DAY) 128 155 80-3	NESS (CA,MG) (MG/L) 154 193 208	CAR- BONATE HARD- NESS (MG/L)	AO- SDRP- TIDN RATIO	FIC COND— UCTANCE (MICRO— MHOS)	(UNITS)	7.0 0.5
OCT. 24 NDV. 20 DEC. 01 JAN. 12 FEB.	SOLVED FLUO- RIDE (F) (MG/L) -3 -3	(ND3) (MG/L) -4 -2 -1	SDLVED BORON (B) (UG/L) 40 50 60	SOLVED SOLIOS (SUM DF CDNSTI- TUENTS) (MG/L) 317 323 343 250	SDL VED SOLIDS (TONS PER AC-FT)	SOL VED SOL IDS (TONS PER DAY) 128 155	NESS (CA,MG) (MG/L) 154	CAR- BONATE HARD- NESS (MG/L)	A0- SDRP- TIDN RATIO	FIC CONO- UCTANCE (MICRO- MHOS)	(UNITS)	7.0 0.5 1.0
DCT. 24 NDV. 20 DEC. 01 JAN. 12 FEB.	SOLVED FLUD- RIDE (F) (MG/L) -3 -3 -2 -2	(ND3) (MG/L) .4 .2 .1 .3	SDLVED BORON (B) (UG/L) 40 50 60 40	SOLVED SOLIOS (SUM DF CDMSTI- TUENTS) (MG/L) 317 323 343 250 267	SDLVED SOLIDS (TONS PER AC-FT) -43 -47 -48 -36	SOLVED SOLIDS (TONS PER DAY) 128 155 80.3 86.1	NESS (CA, MG) (MG/L) 154 193 208 157	CAR- BONATE HARD- NESS (MG/L) 0 14 11	A0- SDRP- TIDN RATIO 1.9 1.2 1.2	FIC CONO- UCTANCE (MICRO- MHOS)	(UNITS)	7.0 0.5 1.0
OCT. 24 NDV. 20 DEC. 01 12 FEB. 09 MAR.	SOLVED FLUO- RIDE (F) (MG/L) .3 .3 .2 .2	(ND3) (MG/L) .4 .2 .1 .3	SDLVED BORDN (B) (UG/L) 40 50 60 40 40 50	SOLVED SOLIOS (SUM DF CDMSTI- TUENTS) (MG/L) 317 323 343 250 267 255	SDL VED SOLIDS (TONS PER AC-FT) .43 .47 .48 .36	SOLVED SOLIDS (TONS PER DAY) 128 155 80.3 86.1 108	NESS (CA, MG) (MG/L) 154 193 208 157 160 145	CAR- BONATE HARD- NESS (MG/L) 0 14 11 0	A0- SDRP- TIDN RATIO 1.9 1.2 1.2	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	7.0 0.5 1.0 0.5 0.5
OCT. 24 NDV. 20 DEC. O1 JAN. 12 FEB. O9 25 MAR. 24 APR.	SOLVED FLUD- RIDE (F) (MG/L) -3 -3 -2 -2	(ND3) (MG/L) .4 .2 .1 .3 .0 .0	SDLVED BORON (B) (UG/L) 40 50 40 40 50	SOLVED SOLIOS (SUM DF COMSTI- TUENTS) (MG/L) 317 323 343 250 267 255	SDL VED SOL IDS (TONS PER AC-FT) .43 .47 .48 .36 .39 .36	SOLVED SOLIDS (TONS PER DAY) 128 155 80.3 86.1 108 109	NESS (CA, MG) (MG/L) 154 193 208 157 160 145	CAR- BONATE HARD- NESS (MG/L) 0 14 11	A0- SDRP- TIDN RATIO 1.9 1.2 1.2	FIC CONO- UCTANCE (MICRO- MHOS)	(UNITS)	7.0 0.5 1.0 0.5 0.5 6.5
OCT. 24 NDV. 20 DEC. O1 JAN. 12 FEB. 09 25 MAR.	SOLVED FLUO- RIDE (F) (MG/L) .3 .3 .2 .2	(ND3) (MG/L) .4 .2 .1 .3	SDLVED BORDN (B) (UG/L) 40 50 60 40 40 50	SOLVED SOLIOS (SUM DF CDMSTI- TUENTS) (MG/L) 317 323 343 250 267 255	SDL VED SOLIDS (TONS PER AC-FT) .43 .47 .48 .36	SOLVED SOLIDS (TONS PER DAY) 128 155 80.3 86.1 108	NESS (CA, MG) (MG/L) 154 193 208 157 160 145	CAR- BONATE HARD- NESS (MG/L) 0 14 11 0	A0- SDRP- TIDN RATIO 1.9 1.2 1.2	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	7.0 0.5 1.0 0.5 0.5
OCT. 24 NDV. 20 DEC. 01 JAN. 12 FEB. 09 MAR. 24 APR. 22 MAY	SOLVED FLUG- RIDE (F) (MG/L)  -3 -3 -2 -2 -0 -3 -5	(ND3) (MG/L) .4 .2 .1 .3 .0 .0	SDLVED BORON (B) (UG/L) 40 50 40 40 50	SOLVED SOLIOS (SUM DF COMSTI- TUENTS) (MG/L) 317 323 343 250 267 255	SDL VED SOL IDS (TONS PER AC-FT) .43 .47 .48 .36 .39 .36	SOLVED SOLIDS (TONS PER DAY) 128 155 80.3 86.1 108 109	NESS (CA, MG) (MG/L) 154 193 208 157 160 145	CAR- BONATE HARD- NESS (MG/L) 0 14 11 0 6 10	1.9 1.2 1.2 1.2 2.4	FIC CONO- UCTANCE (MICRO- MHOS)	(UNITS)	7.0 0.5 1.0 0.5 0.5 6.5
OCT. 24 24 NDV. 20 DEC. O1 JAN. 12 FEB. MAR. 24 APR. 22 MAY 27 JUNE 24	SOLVED FLUO- FLUO- RIDE (F) (MG/L) .3 .3 .2 .2 .2	(ND3) (MG/L) .4 .2 .1 .3 .0 .0	SDLVED BORON (B) (U6/L) 40 50 60 40 40 40 40	SOLVED SOLIOS SOLIOS (SUM DF CDNSTI-TUENTS) (MG/L)  317  323  343  250  267  255  363  356	SDL VED SOL IDS (TOMS PER AC-FT)  -43 -47 -48 -36 -39 -36 -51	SOLVED SDLIDS (TONS PER DAY)  128  155  80.3  86.1  108 109  126	NESS (CA,MG) (MG/L) 154 193 208 157 160 145 154 211	CAR- BONATE HARD- NESS (MG/L)  0 14 11 0 6 10 0 46	1.9 1.2 1.2 2.4 1.1	FIC CONCIONAL CONTROL		7.0 0.5 1.0 0.5 0.5 0.5 2.5
OCT. 24 NDV. 20 DEC. 01 12 FEB. 09 25 MAR. 22 MAR. 22 JUNE 24 JUNE 24 JUNE 14	SOLVED FLUO- FLUDE (F) (MG/L) .3 .3 .2 .2 .0 .3 .5	(ND3) (MG/L) .4 .2 .1 .3 .0 .0	SDLVED BORON (B) (U6/L) 40 50 60 40 40 40 10	SOLVED SOLIOS (SUM DE CONSTI-TUENTS) (MG/L) 317 323 343 250 267 255 363 356 93	SOLVED SOLVED SOLIDS (TOMS PER AC-FT) .43 .47 .48 .36 .39 .36 .51 .47 .15	SOLVED SOLIDS (TONS PER DAY)  128 155 80.3 86.1 108 109 126 150 1400	NESS (CA,MG) (MG/L)  154  193  208  157  160  145  154  211	CAR- BONATE HARD- NESS (MG/L) 0 14 11 0 6 10 0	A0- SORP- TIDN RATIO 1.9 1.2 1.2 .9 1.1 1.2 2.4	FIC COND- UCTANCE (MICRO- MHUS)		ATURE (DEG C)  7.0  0.5  1.0  1.D  0.5  6.5  2.5
OCT. 24 NDV. 20 DEC. 01 JAN. 12 FEB. 09 25 MAR. 24 APR. 21 JUNE 24 JUNE	SOLVED FLUD- FLUD- FLUD- (F) (MG/L) .3 .3 .2 .2 .2 .0 .3 .5 .6	(ND3) (NG/L) .4 .2 .1 .3 .0 .0 .0	SDLVED BORON (B) (U6/L) 40 50 60 40 40 40 10 20	SOLVED SOLIOS (SUM DE CONSTI-TUENTS) (MG/L) 317 323 343 250 267 255 363 356 93 83	SOLVED SOL	SOLVED SOLIDS (TONS PER DAY)  128 155 80.3 86.1 108 109 126 150 1400 653	NESS (CA, MG/L)  154  193  208  157  160  145  211  62  51	CAR- BONATE HARD- NESS (MG/L) 0 14 11 0 6 10 0 46 6	A0- SORP- TIDN RATIO 1.9 1.2 1.2 .9 1.1 1.2 2.4	FIC COND- UCTANCE (MICRO- MHOS)		ATURE (DEG C)  7.0  0.5  1.0  1.D  0.5  6.5  2.5  12.0  16.5

### 09259700 LITTLE SNAKE RIVER NEAR BAGGS, WYO .-- Continued

#### FIELD DETERMINATIONS

SPECI-FIC COND-DIS- UCTANCE CHARGE (MICRO-DIS-SOLVED PH TEMPER-DXYGEN ATURE (MG/L) (UNITS) (DEG C) TIME DATE (CFS) MHOS) DATE OCT. 24... NGV. 20... DEC. 01... JAN. 12... FEB. 150 1325 495 9. R 8.5 7.0 165 49D 1530 11.9 8.4 .5 1300 85 525 11.4 8.5 119 408 1.0 1600 9.1 8.0 12... FEB. 09... 25... MAR. 24... 1645 1715 140 150 460 9.7 390 10.6 0.5 1545 125 585 9.4 8.4 6.5 APR. 22... MAY 27... JUNE 24... JULY 14... 0845 160 550 9.7 8.6 2.5 7.3 1815 4800 130 7.6 12.0 7.5 1630 2750 120 7.8 16.5 0830 300 310 7.3 8.2

#### 09260000 LITTLE SNAKE RIVER NEAR LILY, COLO.

LOCATION.--Lat 40°32'50", long 108°25'25", in NW 1NE1 sec. 20, T.7 N., R.98 W., Moffat County, at gaging station 170 ft downstream from highway bridge, 6 miles north of Lily, and 10 miles upstream from mouth.

DRAINAGE AREA. -- 3,730 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: November 1969 to September 1970.

CHEMICAL ANALYSES, NOVEMBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SIO2) (MG/L)	CAL~ CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- Sium (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SD4) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)
NDV.	179	0.0	14	45	12	66	1.8	203	90	26	. 3
DEC.	79	0.0	18	63	17	72	1.9	269	122	24	• 3
JAN. O6 FEB.	90	0.0	18	56	16	60	1.9	253	104	14	•2
03 MAR.	130	0.0	15	51	14	54	2.3	222	96	20	.4
03 4PR.	338	0.5	10	47	12	49	1.7	213	86	16	-4
28 MAY	1580	4.5	27	57	16	61	2.5	222	135	18	.4
12 JUNE	2460	10.0	11	32	7.8	18	1.5	122	43	7.0	. 3
JULY	3210	14.0	10	16	4.4	7.9	1.0	74	12	2.7	• 2
07 AUG.	756	17.0	11	25	5.4	19	1.6	114	31	6.3	.3
04 24	94 17	18.0 23.5	13 12	53 64	14 18	72 105	4.0 4.7	220 22 <b>6</b>	129 207	24 40	.4 .6
SEPT. 22	68	12.5	12	52	15	84	3.0	216	146	76	.4
				DIS- SOLVED	DI S-	DIS-		NON-	SODIUM	SPECI-	
DATE	VITRATE (NO3) (MG/L)	URTHO PHDS- PHATE (PO4) (MG/L)	80RON (B) (UG/L)	SDLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOL VED SOL IDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	рн (UNITS)
NOV. 04	(NO3)	PHDS- PHATE (PO4)	(B)	SDLIDS (RESI- OUE AT 180 C)	SOLVED SOLIDS (TONS PER	SOLVED SOLIDS (TONS PER	NESS (CA,MG)	CAR- BONATE HARD- NESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO-	
NOV. 04 DEC. 02	(NO3) (MG/L)	PHDS- PHATE (PO4) (MG/L)	(B) (UG/L)	SDLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOL VED SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
04 DEC.	(NO3) (MG/L) 1.4	PHDS- PHATE (PO4) (MG/L)	(B) (UG/L)	SDLIDS (RESI- OUE AT 180 C) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOL VED SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 7.9
NOV. 04 DEC. 02 JAN. 06	(NO3) (MG/L) 1.4	PHDS- PHATE (PO4) (MG/L) .16	(B) (UG/L) D	SDLIDS (RESI- DUE AT 180 C) (MG/L) 379 482	SOLVED SOLIDS (TONS PER AC-FT) .52	SOL VED SOLIDS (TONS PER DAY) 183 103	NESS (C4,MG) (MG/L) 161 228	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO 2.3	FIC COND- UCTANCE (MICRO- MHOS) 579	(UNITS) 7.9 7.9
NOV. 04 DEC. 02 JAN. 06 FEB. 03 MAR.	(NO3) (MG/L) 1.4 .1	PHDS- PHATE (PO4) (MG/L) .16 .13 .05 .01	(B) (UG/L) D 9 8 6	SDLIDS (RESI- OUE AT 180 C) (MG/L) 379 482 415 385 331	SOLVED SOLIDS (TONS PER AC-FT) .52 .66	SOL VED SOLIDS (TONS PER DAY) 183 103	NESS (CA,MG) (MG/L) 161 228 208	CAR- BONATE HARD- NESS (MG/L) 0 7	AD- SORP- TION RATIO 2.3 2.1	FIC COND- UCTANCE (MICRO- MHOS) 579 698	7.9 7.9 7.9 7.8
NOV. 04 DEC. 02 JAN. 06 FEB. 03 MAR. 03 APR. 28	(NO3) (MG/L) 1.4 .1 1.1 .5 1.7	PHDS- PHATE (PO4) (MG/L) .16 .13 .05 .01 .14	(B) (UG/L) D 9 8 6 7	SDLIDS (RESI- OUE AT 180 C) (MG/L) 379 482 415 385 331	SOL VED SOL IDS (TONS PER AC-FT) .52 .66 .56 .52 .45	SOL VED SOLIDS (TONS PER DAY) 183 103 102 135 302 1780	NESS (CA,MG) (MG/L) 161 228 208 184 164 208	CAR- BONATE HARD- NESS (MG/L) 0 7 0 2	AD- SORP- TION RATIO 2.3 2.1 1.8 1.7 1.7	FIC COND- UCTANCE (MICRO- MHOS) 579 698 626 587 517 617	(UNITS) 7.9 7.9 7.8 7.0 8.0 7.6
NOV. 04 DEC. 02 JAN. 06 FEB. 03 APR. 28 MAY 12 JUNE	(NO3) (MG/L) 1.4 .1 1.1 .5 1.7	PHDS- PHATE (PO4) (MG/L) .16 .13 .05 .01 .14 .02	(B) (UG/L) D 9 8 6 7	SDLIDS (RESI- OUE AT 180 C) (MG/L) 379 482 415 385 331 416	SOL VED SOL IDS (TONS PER AC-FT) .52 .66 .56 .52 .45 .58	SOL VED SOLIDS (TONS PER DAY) 183 103 102 135 302 1780	NESS (CA,MG) (MG/L) 161 228 208 184 164 208	CAR-BONATE HARD-NESS (MG/L)  0  7  0  2  0  26	AD- SORP- TION RATIO 2.3 2.1 1.8 1.7 1.7	FIC COND- UCTANCE (MICRO- MHOS) 579 698 626 587 517 617 282	7.9 7.9 7.8 7.0 8.0 7.6 7.9
NOV. 04 DEC. 02 JAN. 06 FEB. 03 MAR. 28 MAY. 12 JUNE 09	(NO3) (MG/L) 1.4 .1 1.1 .5 1.7 1.4	PHDS- PHATE (PO4) (MG/L) .16 .13 .05 .01 .14 .02 .17	(B) (UG/L) D 9 8 6 7 0	SDLIDS (RESI- OUE AT 180 C) (MG/L) 379 482 415 385 331 416 186	SOL VED SOL IDS (TONS PER AC-FT) .52 .66 .56 .52 .45 .25	SDL VED SOL IDS (TIDNS PER DAY) 183 103 102 135 302 1780 1240 893	NESS (CA,MG) (MG/L) 161 228 208 184 164 208 112	CAR- BOMATE HARD- NESS (MG/L)  0  7  0  2  0  26  12	AD- SORP- TION RATIO 2.3 2.1 1.8 1.7 1.7 1.8	FIC COND- UCTANCE (MICRO- MHOS) 579 698 626 587 517 617 282 142	7.9 7.9 7.8 7.0 8.0 7.6 7.9
NOV. 04 02 JAN. 06 FEB. 03 MAR. 03 APR. 28 MAY 12 JUNE 09 O7 AUG.	(NO3) (MG/L) 1.4 .1 1.1 .5 1.7 1.4 1.7	PHDS- PHATE (PO4) (HG/L) .16 .13 .05 .01 .14 .02 .17 .06 .10	(B) (UG/L)  D  9  8  6  7  0  D	SDL IDS (RESITOUE AT 180 C) (MG/L) 379 482 415 385 331 416 186 103	SOL VED SOL IDS (TONS PER AC-FT) .52 .66 .56 .52 .45 .25 .14 .22	SDL VED SDL IDS STORMS PER DAY)  183  103  102  135  302  1780  1240  893  331	NESS (C4, MG) (MG/L) 161 228 208 184 164 208 112 58	CAR- BONATE HARO- NESS (MG/L) 0 7 0 2 0 26 12 0 0	AD- SORP- TION RATIO 2.3 2.1 1.8 1.7 1.7 1.8 .7	FIC COMPONENT AND STATE OF STA	(UNITS) 7.9 7.9 7.8 7.0 8.0 7.6 7.9 7.6 7.7
NOV. 04 DEC. 02 JAN. 06 FEB. 03 MAR. 03 APR. 28 MAY 12 JUNE 09 JULY 07	(NO3) (MG/L) 1.4 .1 1.1 .5 1.7 1.4	PHDS- PHATE (PO4) (MG/L) .16 .13 .05 .01 .14 .02 .17	(B) (UG/L) D 9 8 6 7 0	SDLIDS (RESI- OUE AT 180 C) (MG/L) 379 482 415 385 331 416 186	SOL VED SOL IDS (TONS PER AC-FT) .52 .66 .56 .52 .45 .25	SDL VED SOL IDS (TIDNS PER DAY) 183 103 102 135 302 1780 1240 893	NESS (CA,MG) (MG/L) 161 228 208 184 164 208 112	CAR- BOMATE HARD- NESS (MG/L)  0  7  0  2  0  26  12	AD- SORP- TION RATIO 2.3 2.1 1.8 1.7 1.7 1.8	FIC COND- UCTANCE (MICRO- MHOS) 579 698 626 587 517 617 282 142	7.9 7.9 7.8 7.0 8.0 7.6 7.9

#### 09261000 GREEN RIVER NEAR JENSEN, UTAH

LOCATION. --Lat 40°24'34", long 109°14'05" in SW}SER sec. 5, T.5 S., R.24 E., Uintah County, at gaging station 300 ft upstream from highway bridge, 1 mile downstream from Cub Creek and Chew Ranch, 4 miles southeast of Dinosaur National Monument headquarters, 6.5 miles northeast of Jensen, 12 miles upstream from Brush Creek, and 313.9 miles from mouth.

DRAINAGE AREA. -- 25,400 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: June 1947 to September 1952, April 1962 to September 1969 (daily), Octo-ber 1969 to September 1970 (monthly), Water temperatures: March 1949 to September 1959, October 1961 to September 1970. Sediment records: May 1948 to September 1970.

EXTREMES. -1969-70:

Specific conductance: Maximum daily, 857 micromhos Apr. 8; minimum daily, 196 micromhos May 28. Water temperatures: Maximum, 23.5°C Aug. 4; minimum, freezing point on several days during December and Janu-

Sediment concentrations: Maximum daily, 5,910 mg/l Apr. 8; minimum daily, 15 mg/l Aug. 24 Sediment discharge: Maximum daily, 144,000 tons June 13; minimum daily, 101 tons Aug. 24.

Period of record:

Dissolved Solids (1947-52, 1962-69): Maximum, 2,150 mg/l Sept. 10, 1963; minimum, 131 mg/l May 15-31, 1963. Hardness (1947-52, 1962-69): Maximum, 1,250 mg/l Aug. 12, 1963; minimum, 84 mg/l June 1-16, 1963. Specific conductance: Maximum daily, 2,330 micromhos Sept. 10, 1963; minimum daily, 176 micromhos May 24, 1963.

Water temperatures:

1963. ater temperatures: Maximum, 30.0°C July 11, 1958; minimum (1949-59, 1961-64, 1965-70), freezing point on many days during winter periods. ediment concentrations: Maximum daily, 40,600 mg/l Aug. 23, 1960; minimum daily, 9 mg/l Oct. 7-11, 1953, Nov. 22, 1962. ediment discharge: Maximum daily, 2,500,000 tons Mar. 29, 1962; minimum daily, 10 tons on many days during 1962.67 Sediment Sedin

1962-63

REMARKS. -- Chemical-quality samples and temperature data collected at site 8 miles downstream from gaging station. CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIC2) (MG/L)	DIS- SOLVED CAL- CILM (CA) (MG/L)	DIS- SCLVED MAG- NE- SIUM (MG) (MG/L)	SODILM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCC3) (MG/L)	CAR- BCNATE (CC3) (MG/L)	SULFATE (SC4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
001.									_			
14 28	123C 1225	258D 2540	5.2 2.9	61 57	23 22	69 62	2.5 2.7	186 180	C S	194 170	21 23	-4
NOV.			,						_			
25	1350	2520		57	23	51	1.8	182	c	163	23	
DEC.					29			183	С	180	23	
12 JAN.	1300	3760		53	29	53	2.5	163	,	100	23	
13	0950	2060	5.4	59	23	57	3.0	185	С	181	22	.3
FEB.												
10	141C	1620	6-6	56	23	52	2.6	196	c	158	26	.3
MAR.		2340		59	23	65	2.5	152	4	192	28	.3
12 APR.	1020	2340	5.4	29	23	65	2. 7	172	-	172	20	• • • •
17	0930	3330	7.5	57	23	52	2.4	193	0	162	19	•3
MAY												
13	1056	10100	9.6	39	12	20	1.9	152	0	59	7.5	• 2
JUNE 15	9835	13000	9.7	25	8.3	27	2.1	110	e	55	7.4	.3
JULY	9033	13000	7. /	23	0.3	21	2.1	***	•	• • • • • • • • • • • • • • • • • • • •	,	• • •
15	0945	3970	6.3	41	16	36	2.4	141	c	100	16	.3
AUG.												_
14	1137	2230	4.3	62	22	58	2.7	178	2	174	21	• 3
SEP. 16	1700	1710	3.6	59	25	63	2.8	151	sc	196	25	-4

DATE	NITRATE (N) (WG/L)	OIS- SCLVED BORDN (B) (UG/L)	C(S- SOLVED SCLIDS (RESI- DUE AT 180 C) (MG/L)	O IS- SOLVED SOLICS (SUM OF CONSTI- TUENTS) (MC/L)	CIS- SOLVED SCLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TCNS PER DAY)	HARD- NESS (CA:MG) (MG/L)	NCN- CAR- 8 ONATE HARC- NESS (MG/L)	S CDIUM AC- SORP- TICN RATIC	SPECI- FIC CDND- UCTANCE (*ICRC- MHOS)	PH (UNITS)
CCT.					. 64	3290	245	92	1.7	713	7.7
14		110	472 451	458 429	.61	3090	231	63	1.8	677	8.1
28 NOV. 25			455	408	•62	3100	236	87	1.5	677	8.0
DEC.			45C	43C	.61	4570	252	102	1.5	694	2.3
JAN. 13		110	450	444	.61	250D	242	90	1.6	691	7.9
FEB.		140	435	422	.59	1900	234	74	1.5	659	8.1
MAR . 12		120	502	476	.68	3170	242	78	1.8	695	8.3
APR. 17		60	412	429	.56	3700	235	77	1.5	640	8.1
MAY 13		46	226	227	.30	6D0D	147	22	-7	340	7.9
JUNE 15		60	208	1 90	-28	7300	96	6	1.2	309	7.7
JULY		50	309	288	.42	331D	166	50	1.2	475	7.6
AUG.	.62	80	448	436	.61	270D	246	97	1.6	676	8.3
SEP. 16	.10	7C	481	472	.65	2220	250	93	3.7	724	8.8

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## 09261000 GREEN RIVER NEAR JENSEN, UTAH--Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
I	715	613	680	706			720	449	241	237	620	717
2	733		685	704	673	676	744	498	242	248		728
3	722	670	678	699	677	664	725		219		634	735
4	735	674	687		698	667	721	496	225		625	732
5		665	687	706	676	673		498	220		637	
6	721	687	685	726	685		732	403	227	299	652	
7	705	695		726	686		640	402		357	671	781
8	707	701	678	715			857	363	237	362		
9	728		690			691	735	359	218	385		748
10		680	688		670	686	743		216	375	676	760
11		690	685		677	691	760	326	222	382	668	740
12		676	689		667	707		327	259		655	
13	712	685	687	685	660	695	621	332		421	659	
14	715	679		698	667	707	606	309		434	674	727
15	706	682	684	663			598		286	414		702
16	708		684		653	711	644		283	477		729
17		661	684	661	653	697	632		268	485	669	728
18		664	681		672	695			268	493	653	712
19		676	679		6T9	695		282	262		705	718
20	664	671	679	665		688	634	2 94	243		706	719
21	661					686	649	253		554	712	707
22	731	677		649			652	240	243	594	712	
23	725		673		677	714	670	248	245	599		724
24	703	688	655	657	677	716			236	573	701	729
25	705	675	670		661	666		207	229		706	
26		674	670	636	680	738		226	226	~	705	
27	697	680	664	636		720	727	201	228	565	718	
28	689	683				743	724	196		581	708	725
29	675	690	681				641		226	591	724	729
30	698		681	669		706	463		222	643		724
31	657		695	669		710				598	710	
AVG		679	681						240			

# \*EMPERATURE (°C) OF WATER, WATER YEAR DCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

PAY	ост	NOV	DEC	NAL	FE8	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.0	8.0	4.5	0.0			5.0	9.0	14.0	20.0	22.0	18.5
2	13.0		4.5	0.0	2.0	5.0	6.5	9.5	15.5	20.0		18.0
3	11.0	7.0	4.5	0.0	2.5	4.5	6.0		13.5		21.5	18.5
4	11.0	7.0	4.5		2.0	4.5	6.5	14.0	15.5			
5		8.0	4.5	0.0							23.5	16.5
,		0.0	4.7	0.0	2 • 5	5.0		15.5	14.5		23.0	
6	10.0	8.0	5.0	0.0	3.5		10.0	12.5	14.5	21.0	23.0	
7	11.0	8.0		0.0	4.0		10.0	13.5		21.0	19.0	L5.0
4	12.0	8.0	3.5	1.0			8.5	11.5	16.5	21.5		
9	11.0		3.0			5.5	9.0	12.0	16.0	21.0		15.5
10		8.0	4.3		4.5	6.0						
		0.0	4.5		4.5	0.0	7.5		14.0	21.0	19.0	18.0
11		9.0	4.0		3.5	5.5	9.5	11.0	12.5	21.5	20.0	14.0
12		9.0	4.0		5.0	5.0		12.0	13.0		18.5	
13	7.0	8.5	4.5	2.5	5.0	6.0	7.0	13.5		21.0	19.0	
14	7.0	7.0		2.0	5.0	6.0	7.0	13.0		23.0	18.0	13.5
15	8.0	7.5	5.2	2.5			7.0		16.5	23.0		15.0
				2.00			,		10.5	23.0		15.0
16	8.0		4.5		3.5	6.0	9.0		16.5	22.0		13.5
17		5.5	4.5	3.0	4.5	6.5	8.5		17.0	22.0	19.0	15.5
18		6.0	5.0		2.0	5.0			18.0	22.5	18.5	14.0
19		5.5	3.5		3.0	5.5		15.0	19.0		18.5	15.5
20	8.0	3.5	4.5	2.5		4.5	8.0	14.5	19.5		19.0	12.5
									1		.,	2
21	8.0					5.5	7.5	15.0		22.5	14.5	14.5
22	9.0	5.5		4.0			7.0	15.0	19.5	20.5	16.5	
23	9.0		4.5		5.0	6.0	8.5	15.5	19.5	21.0		13.0
24	9.0	5.5	4.5	4.0	6.0	7.0			19.5	21.0	18.0	14.5
25	10.0	4.5	5.0	3.5	5.5	7.0		15.5	21.0	41.5	19.0	1700
		***	,,,	,,,	,,,	1.0		19.9	21.0		19.0	
26		5.0	4.5	3.5	4.5	7.0		14.5	20.5		17.5	
27	10.0	4.5	4.0			5.0	10.0	16.0	21.5	20.0	17.0	
28	8.0	4.0				5.0	8.5	16.5		21.5	18.5	12.0
29	8.0	4.5	1.0	1.5			8.5		18.0	21.0	18.5	13.5
30	8.0		1.0	2.0		5.0	8.5		19.0	20.0		12.5
31	8.0		0.0			5.5				22.0	18.5	12.0
	3.0		0.0			,.,				42.0	10.5	
AVG		6.5	4.0						17.0			

### 09261000 GREEN RIVER NEAR JENSEN, UTAH--Continued

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		CC FE BER			NOVE*BER			DECEMBER	
		MEAN			MEAN				
DAY	MEAN DISCHARGE (CES)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN DISCHARGE (CFS)	ME4N CUNCS + TRATI N (MG/L)	SEDIMENT DISCHARGE (TEVS/DAY)
1 2	3476 3090	7	656 551	2880	271	2110	304 302	35 91	287 742
3	2851	66 62	477	260^ 251,	141 73	495	3370	234	2139
4 5	2380 2196	6r 58	396 <b>34</b> 3	3070 3120	120 197	995 1661	3580 3590	11 : 52	1760 574
6	197^	56	298	2990	145	1170	3670	52	515
7	2690	127	922	3041	107	878	3420	53	499
8 9	3180 2520	297 246	2465 1670	306. 2981	91 78	752 628	276 3270	53 142	395 1250
ıš	2760	212	1590	2450	66	437	406.	380	4170
11	266r	182	1310	276:	62	462	3950	3 3	3230
12	376^ 3760	156	1580 1360	288) 329 <sub>0</sub>	5 P 8 P	451 782	382L 3720	242 225	2500 2270
14	3680	199	1980	3390	132	1210	3820	212	2196
15	3177	162	1390	325~	126	1110	363.	193	1940
16 17	2510 2501	217	1470 1970	2790 264°	121 115	911 820	3HU0 410J	4.1	913 443
19	2360	392	2590	2936	112	870	4220	152	1160
19 20	26 °C 2375	526 736	3ი90 452 პ	3150 3180	105 131	893 807	4∪£6 46#6	259 172	2450 1960
21	3300	2130	18400	315	96		399C	123	1330
22	3120	1920	16200	2810	92	816 698	4:34	84	916
23 24	2940 3040	132	1 1500 7470	2290 2200	8 A	544 499	4300 3767	5s	673 4^6
25	3070	586	4490	2623	81	617	4320	90	1050
26	3230	38.1	3310	3151	77	655	4280	7.4	236
27 28	330r 302n	247 274	2200 2230	2990 2380	51 34	412 218	4200 3850	121 72	1377 748
29	3090	3^4	2541	2845	34	261	3₫5€	43	447
30 31	3350 3510	335 37	3030 3510	2943	34	<sup>7</sup> 61	3541 2545	48 54	459 370
TOTAL	91460		1 '5323	8643.		23472	11567		41127
		JANUARY			FEBRUARY			MARCE	
		MEAN			FEBRUARY MEAN			MARCE! MEAN	
DAY	MFAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (OFS)		SEDIMENT DISCHARGE (TOMS/DAY)	MEAN; DISCHARGE (CFS)		SEPIMENT DISCHARGE (TCMS/DAY)
1	OISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DESCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TOMS/DAY) ZRD	DISCHARGE (CFS) 2550	MEAN COMCENT TRATIL N (MO/L)	(TOUS/DAY)
1 2 3	01 SCHARGE (CFS) 3250 2870 3340	MEAN CONCEN- TRATION (MG/L) 59 63 40	DISCHARGE (TONS/DAY) 519 488 328	DISCHARGE (CFS) 176' 165'	MEAN CONCENT TRATION (MG/L)	DISCHARGE (TOMS/DAY)	DISUHARGE (OFS) 2550 2641 2340	MEAN COMCENT TRATION (MOZE) 320 356 327	# 15CHARGE (TMS/DAY) 2241 2542 2030
1 2 3	01SCHARGE (CFS) 3250 2870 3340 2840	MEAN CONCEN- TRATION (MG/L) 59 63 40 25	DISCHARGE (TONS/DAY) 5'9 488 328 192	DISCHARGE (CFS) 176' 165' 154' 1620'	MEAN CONCENTRATION (MG/L) 59 37 32 23	DISCHARGE (TOMS/DAY) 283 165 133 122	PISCHARGE (CFS) 2550 2647 2340 2340	MEAN COMCENT TRATIL N (MOZE) 326 356 327 297	DISCHARGE (TONS/DAY) 2241 2542 2030 1840
1 2 3 4 5	01sCHARGE (CFS) 3250 2870 3340 2840 2440	MEAN CONCEN- TRATION (MG/L) 59 63 40 25 16	DISCHARGE (TONS/DAY) 579 488 328 192 175	DISCHARGE (CFS) 176' 165' 154' 162' 147.	MEAN CONCENT TRATION (MG/L) 59 37 32 23 31	DISCHARGE (TOMS/DAY) 280 165 133 122 123	DISCHARGE (UFS) 2550 2647 2340 2340 2500	#FAN CONCENT TRATII ( (M3/L) 326 356 327 292 274	01SCHARGE (TCNS/DAY) 2241 2542 2130 1840 1851
1 2 3 4 5	01sCHARGE (CFS) 3250 2870 3340 2840 2440 2540 3350	MEAN CONCENTRATION (MG/L) 59 63 40 25 16	DISCHARGE (TONS/DAY)  5 9  488  328  192  135	DISCHARGE (CFS) 176' 165' 154' 162' 147. 15C' 157'	MEAN CONCENTRATION (MG/L) 59 37 32 23 31 34	DISCHARGE (TOMS/DAY)  280 165 133 122 123 139 153	DISUMARGE (UFS) 2550 2647 2340 2340 4500 4400 2400	MEAN CONCENT TRATIL (MOZE) 320 356 327 290 274 257 241	01SCHARGE (TMS/DAY) 2241 1540 2030 1840 1851
1 2 3 4 5 6 7 8	01SCHARGE (CES) 3250 2870 3340 2840 2440 2540 3350 2930	MEAN CONCEN- TRATION (MG/L) 59 63 47 25 16 20 26 29	DISCHARGE (TONS/DAY)  5 9  488 328 192 3 35 137 235 229	DISCHARGE (CFS) 1761 1651 1541 1620 1677 1570 1571 1710	MEAN CONCEST- TRATION (MG/L) 59 37 32 23 31 34 36 38	DISCHARGE (TOMS/DAY)  28: 165 133 122 123 139 153 175	PISHARGE (CFS)  2550 2640 2340 2340 2340 4500 4400 2400 2400 2400 2330	WEAN CONCENT TRATIL V (MDZ) 320 356 322 292 274 257 241 226	01SCHARGE (TCMS/DAY) 2241 2540 2030 1840 1851 1670 137) 1420
1 2 3 4 5	01sCHARGE (CFS) 3250 2870 3340 2840 2440 2540 3350	MEAN CONCENTRATION (MG/L) 59 63 40 25 16	DISCHARGE (TONS/DAY)  5 9  488  328  192  135	DISCHARGE (CFS) 176' 165' 154' 162' 147. 15C' 157'	MEAN CONCENTRATION (MG/L) 59 37 32 23 31 34	DISCHARGE (TOMS/DAY)  280 165 133 122 123 139 153	DISUMARGE (UFS) 2550 2647 2340 2340 4500 4400 2400	MEAN CONCENT TRATIL (MOZE) 320 356 327 290 274 257 241	01SCHARGE (TMS/DAY) 2241 1540 2030 1840 1851
1 2 3 4 5 6 7 8 9 10	01 SCHARGE (CFS) 32 57 28 77 33 40 28 40 24 47 75 40 33 57 29 31 33 50 35 80	MEAN CONCENTRATION (MG/L)  59 63 40 25 16 26 29 33 37 41	DISCHARGE (TONS/DAY)  5 '9  488  378  192  175  137  235  229  248  358	01 SCHARGE (CFS) 176' 165' 154' 162' 147' 15C' 157' 171' 1610 1620	MEAN CONCE 9- TRATION (MG/L) 59 37 32 31 34 36 38 40 42	DISCHARGE (TOMS/DAY)  2RU 165 133 122 123 139 159 175 174 276 834	DISCHARGE (UFS)  2550 2640 2340 2600 2400 2400 2400 2330 1990 2310 2690	WEAN CONCENTATION (MSZC) 355A 322 299 274 257 241 226 212 234 258	### ##################################
1 2 3 4 5 6 7 8 9	01 SCHARGE (CFS) 32 57 28 72 33 40 28 40 24 40 75 40 33 57 29 31 33 50 35 80 26 61	MEAN CONCENTRATION (HGZL) 59 63 47 25 16 20 26 29 33 37 41 46	DISCIARGE (TONS/DAY) 5 °9 4 88 3 ?8 1 92 1 3 5 1 3 7 2 3 5 2 2 9 2 9 8 3 5 8	DISCHARGE (CFS)  176/ 165- 154- 1620 147.  1500 157/ 171/ 1610 1620 234- 2260	MEAN CINCE 4-TRATICN (MG/L) 59 37 32 23 31 34 36 38 40 42 137 30	DISCHARGE (TOPS/DAY)  20, 165 133 122 123 139 153 175 174 2°6 834 460	01SCHARGE (UFS) 2550 2640 2340 2340 2400 2400 2400 2330 1990 2310 2690	WEAN CONCENT TRATTI V (M3/L) 320 356 322 292 274 257 241 226 212 234 258 15	## (TCPS/DAY)  227  7540 2730 1846 1856 1670 1373 1429 1140 1460 1870 1000
1 2 3 4 5 6 7 8 9 10	OI SCHRAGE (CFS) 32 57 28 72 33 40 2440 7440 33 57 29 33 33 5C 35 40 26 61 31 40 29 40	MEAN CONCENTRATION (HGZL)  59 63 47 25 16 20 26 29 33 37 41 46 52 56	DISCHARGE (TONS/DAY)  5 19 488 378 192 1155 137 229 248 358 294 354 441 460	01 SCHAGE (CFS) 176/ 165- 165- 165- 167- 160- 157- 171- 1610- 1620- 234- 2265- 237- 2266-	MEAN CINCE 4-TRATION (MG/L) 59 47 32 23 31 34 36 40 42 137 40 67	DISCHARGE (TOMS/DAY)  282 165 133 122 123 139 175 174 276 8344 4C1 3377 479	CISCHARGE (CES) 2650 2667 2340 2340 4500 4600 2410 2331 1990 2310 2660 2757 2381	WEAN CONCENT TRATTI V (MIS/L) 320 356 322 292 774 257 241 226 212 234 256 16 153	### DEMARGE (TOTS/DAY)  2247 -5542 -2730 -1846 -1951 -1877 -1877 -1879 -1870 -
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	OLSCHRAGE (CFS) 3257 2877 3346 2440 7440 7540 3357 2937 3350 3580 2667 2611 3140 2940	MEAN CONCENTRATION (MG/L)  59 63 47 25 16 20 26 29 33 37 41 46 52 58	DISCHARGE (TONS/DAY)  5 19 488 328 192 115  137 225 229 298 358 294 441 460 429	01 Schäde (GFS) 176' 165' 165' 167' 197' 197' 197' 1010' 1020' 234' 2265 237'' 2266 2190	MEAN CINCE 9-TRATILIN [MG/L] \$9 37 32 31 34 36 38 40 42 132 50 40 67 93	DISCHARGE (TOMS/DAY)  282 165 133 122 123 139 175 174 276 8344 4C3 337 479 550	ELS.MARGE (CLES) 2550 2667 2344 2340 2505 4007 2407 2407 2407 2509 2660 2757 238 1466	WEAN CONCETT TRAIT IN (MS/L) 320 356 32/ 297 274 257 261 226 224 258 161 153 146	DISCHARGE (TOTS/DAY)  2247 -5540 2730 1846 1956 1870 1870 1849 1849 1849 1849 1860 1870 1090 1190 985 733
1 2 3 4 5 6 7 8 9 10	DISCHAGE (CFS) 325C 287C 334C 2840 2754 2754 335C 355C 265C 265C 265C 275C 275C 275C 275C 275C 275C 275C 27	MEAN CONCENTRATION (HGZL)  59 63 47 25 16 20 26 29 33 37 41 46 52 56	DISCINAGE (TONS/DAY)  5 19 488 328 192 115 137 235 229 248 358 294 344 441 440 429 379 327	01 Schäde (CFS) 176' 165' 165' 162' 162' 167' 157' 171' 1610 1620 234' 2265 231'' 226 2190	MEAN CINCE I - TRATICI - T	DISCHARGE (TOMS/DAY)  280 165 133 122 123 139 153 175 174 276 834 463 307 479 556	CISCHARGE (CEF) 2550 2667 2340 2340 2340 267 207 207 207 207 207 207 207 207 207 20	VFAN CONCETT TRATTI 14G/LI 320 35A 12/ 297 274 257 241 257 242 213 258 15 16 153 144	### ##################################
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	OI SCHRAGE (CFS) 32 57 28 72 33 46 2446 2446 293 3556 266 2616 3146 2946 2756 2581 1910	YEAN CONCENT ATTION (MG/L) 59 63 47 25 16 26 26 29 33 37 1 46 52 56 57 57 47 47 47	DISCIIARGE (TONS/DAY)  5 '9  488  378  192  115  137  735  229  298  358  794  324  441  460  479  379  327  227	01 Schäde (CFS) 165- 165- 165- 165- 162- 162- 167- 150- 157- 171- 1610- 1620- 234- 226- 237- 226- 2190- 1800- 206- 2440-	Mt AM LINGE LANGE	DISCHARGE (TOMS/DAY)  2RC) 165 133 122 123 139 153 175 174 276 R34 4C3 307 4 19 55c 632 717 843	ETSCHARGE (CEF) 2550 7647 2340 2340 2340 2440 2440 2440 2440 2440	WFAN CONCETTANTIN (NGZ/L)  120	### TOO HARDE (TOTAL PART)  724
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHRAGE (CFS) 325C 287C 334C 2840 2754 2754 335C 355C 265C 265C 265C 275C 275C 275C 275C 275C 275C 275C 27	MEAN CONCERN (MG/L) 59 63 47 25 16 20 26 29 33 37 41 46 52 50 54 51 47	DISCINAGE (TONS/DAY)  5 19 488 328 192 115 137 235 229 248 358 294 344 441 440 429 379 327	01 Schläde (GF) 1761 1651 1651 1641 1621 1771 1501 1571 1711 1610 2341 2265 2341 2265 2371 2266 2190	MEAN CINICE I-N CINICE I-N (PG/L) 99 37 32 33 31 34 36 40 42 137 90 90 90 137 90 129 129	DISCHARGE (TOMS/DAY)  282 165 133 122 123 139 153 175 174 276 834 4ECI 33.77 4.79 55c 632 71.7	ETSLMARGE (CLFS) 2550 2647 2340 2340 2400 2400 2400 2410 2690 2690 2757 2381 1660 2757 2381	WFAN CONCETT (MG/L) 326 356 327 297 274	INISCHARGE (TOTY) DAY 1 7247 - 540 - 2730 - 1846 - 1951 - 1846 - 1870 - 1846 - 1870 -
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21	OISCHRAGE (CFS) 32 57 28 72 33 46 2446 2446 25 35 56 26 16 31 46 29 46 20 20 20 20 20 20 20 20 20 20 20 20 20	YEAN CONCENT ATTENTION (MG/L)  59  40  20  20  20  30  37  41  46  52  59  51  47  44  42  39  36	DISCIIARGE (TONS/DAY)  5 '9  488  378  192  115  137  715  229  298  358  794  324  441  460  479  379  327  227  220  192  204	01 Schläde (GF) 1761 165- 165- 164- 162- 147. 1501 157- 171- 1010 1020 234- 226- 237- 226- 229- 2190 180- 206- 244- 264- 264- 264- 264- 264- 264- 26	Mt AM CINICE TRATILO T	BISCHARGE (TOMS/DAY)  282 165 133 122 123 139 153 175 176 276 814 403 307 409 556	ELSUMARGE (CLES) 2550 2667 2340 2340 2340 2340 2340 2340 2340 2690 2690 2690 2690 2690 2490 2490 2490 2490 2690 2490 2490 2490 2490 2490 2490 2490 24	WFAN CONCETT (MG/L) 326 327 297 274 257 241 226 212 234 258 161 153 146 142 89 177	### SCHARGE (TOTY) DAY 1  724
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 27	DISCHRAGE (CES) 3250 2870 3340 2840 27540 3350 2930 3550 2660 2610 3140 2750 2750 2750 2750 2750 2750 2750 275	"EA'S CONCERN TRATION (MG/L) 59 63 34 c 25 16 20 20 33 37 41 46 52 50 54 47 42 39 36 6 34 46 42 39 36 6 34	DISCINAGE (TONS/DAY)  5 19 488 328 192 115 137 225 229 248 378 294 344 441 440 429 379 327 277 200 192 204 171	01 Schäde (GFS) 176' 165' 165' 167' 150' 157' 171' 1010' 1020' 234' 226' 234' 226' 234' 244' 266' 244' 263' 244' 263'	Mt AM CINICE II. TRATILIA (PG/L) 197 37 32 33 31 34 36 40 42 137 30 49 67 95 129 128 129 128 129 129 129 129 129 129 129 129 129 129	BISCHARGE (TOMS/DAY)  282 165 133 122 123 139 153 175 176 276 814 403 307 409 556 612 717 843 870 924 719 627	CISCHARGE (CES) 2550 2667 2340 2340 2340 2340 2340 2340 2340 2340	WFAN CONCETT (MG/L) 376 327 297 274 257 241 226 212 234 258 161 153 146 142 112 89 177 128 141 156	### TEACH ARCH ARCH ARCH ARCH ARCH ARCH ARCH A
1 2 3 4 5 5 6 7 7 8 8 9 10 11 12 13 14 4 15 15 16 17 17 19 20 21 27 23 24	DISCHRAGE (CES) 3250 2870 3340 2840 27540 3350 2931 3350 2660 2610 3140 2750 2750 2750 2750 2750 2750 2750 275	**EA'4 CONCENT ATTION (MG/L) 59 63 47 25 16 20 26 29 33 37 41 46 52 50 54 47 44 42 39 36 6 34 33 32 2	DISCINAGE (TONS/DAY)  5 19 488 328 192 175 725 727 725 727 727 727 727 727 727 7	01 Schäde (GFS) 176' 165' 154' 165' 154' 165' 154' 177' 171' 1610' 1620' 177' 171' 1610' 1620' 178' 178' 178' 178' 178' 1620'	Mt AM CINICE TRATILIAN (PG/L)  197	BISCHARGE (TOMS/DAY)  282 165 133 122 139 153 175 176 276 844 403 307 409 550 612 717 943 970 924 719 627 608 1990	CISCHARGE (CSS) 2550 2647 2340 2340 2340 2340 2340 2340 2340 2340	WFAN CONCETT N C	### TECHARGE (TOTAL PARTIES AND
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	OISCHRAGE (CFS) 32 57 28 72 33 46 2446 2446 2546 293 3550 2660 2610 3140 2940 2750 2581 1910 1766 1827 2100 1860 2660 2660 2660 2660 2660 2660 2660 2	YEAN CONCENT ATTENTION (MG/L)  63 47 25 16 20 26 29 33 37 41 46 52 58 54 47 44 42 39	DISCINAGE (TONS/DAY)  5 '9  488  378  192  115  137  715  229  298  558  794  374  441  460  479  379  327  227  220  192  204  171  150	01 Schäde (CFS) 165- 165- 165- 165- 162- 162- 167- 171- 1610- 1620- 234- 226- 237- 226- 2190- 1800- 206- 2441- 263- 2400- 2190- 2230	Mt AM CINNEE TRATILIN (PG/L)  59 37 32 33 31 34 36 38 40 42 137 39 129 129 129 121 111 1:6	DISCHARGE (TOWS/DAY)  2 RC) 165 133 122 123 139 153 175 174 276 834 4C3 307 4 19 55c 632 717 843 870 924 719 627 608	CISCHARGE (CES) 2550 2647 2340 2340 2340 2505 4400 2(1) 2690 2690 2690 2757 2381 1860 2(0) 2131 2490 2600 2750 2131 2490 2600 2750 2131 2490 2600 2750 2131 2490 2600 2750 2131 2490 2600 2750 2131 2490 2600 2750 2750 2750 2750 2750 2750 2750 27	#FAN CONCETT TANTIN (MGZ/L) 326 356 327 274 226 227 241 226 218 234 25P 15 163 146 117 28 9 177 128 141 156 177	### DEMARCE (TOTAL PART AND
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	OISCHRAGE (CFS) 32 57 28 72 33 46 2446 2446 2540 33 57 33 56 26 67 26 11 31 46 29 40 27 52 25 58 19 10 17 66 18 27 2100 18 67 16 67	**EAN CONCENT ATTION (MG/L) **  63 47 25 16 20 26 29 33 37 41 46 52 77 44 42 23 9 36 34 33 32 2 32 32 31	DISCHARGE (TONS/DAY)  5 19 488 378 102 115 137 235 229 248 358 204 441 460 479 379 327 277 290 192 204 171 150 132 143	01 SCHARGE (CFS) 176' 165' 165' 162' 167' 171' 1610' 1620' 234' 2265' 234' 2265' 2190' 1800' 206' 2444' 2444' 244' 244' 244' 245' 2190' 2190' 220' 2200' 2200' 2200' 2200' 2200' 2200' 2200' 2200' 2200' 2200' 220	MEAN LINGUIST AND	DISCHARGE (TOMS/DAY)  2 RU 165 183 122 139 159 176 8 As4 4 CU 3 307 4 199 5 SC 6 32 717 8 43 8 70 9 719 6 77 6 719 6 77 6 78 6 78 6 79 6 79 6 79 6 79 6 79 6 79 6 79 6 79	ETSLHARGE (CES) 2550 2647 2340 2340 2340 2341 2341 2341 2341 2690 2660 2757 2381 1860 2,000 2130 2490 2490 2490 2490 2490 2490 2490 249	VFAN CONCETT TANTIN (NGZ/L) 320 356 327 274 256 221 234 256 153 146 177 128 117 127 127 217 217 217 217 217 217 217	### TECHARGE (TOTAL PARTIES AND
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	DISCHRAGE (CFS)  32 5C 28 7C 28 7C 28 4C 28 4C 29 4C 2	**EAN CONCENT ATTION (MG/L) **  63 47 25 16 20 26 29 33 37 41 46 42 29 46 42 29 39 38 39 29 29 29 29 29 29 29 29 29 29 29 29 29	DISCHARGE (TONS/DAY)  5 19 488 378 102 115 137 275 229 248 358 204 441 460 479 379 327 277 270 192 204 1171 150 132 143	01 Schäde (CFS) 176' 165' 165' 165' 162' 167' 171' 1610' 1620 234' 226' 227' 226' 2190' 1800' 206' 244' 264' 264' 264' 264' 264' 264' 26	MEAN LINGUIST AND	DISCHARGE (TOMS/DAY)  2RU 165 133 122 123 139 153 175 174 276 834 463 307 479 55c 632 717 843 870 627 6.03 155c 1900 7000 2270	ETSLHARGE (CES) 2550 2647 2340 2340 2340 2340 2340 2340 2340 2340	VFAN CONCETT (MGZ/L)  326 356 327 274 276 212 234 256 161 3146 177 177 128 1156 177 177 177 177 177 177 177 177 177 17	### ##################################
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 15 16 17 17 17 17 17 17 17 17 17 17 17 17 17	DISCHAGE (CES) 3257 2877 3346 2846 27549 3357 2937 3356 2667 2610 2100 2757 2100 1660 1660 1670 1837	YEAN CONCENT (MG/L)  59  63  47  25  16  20  26  29  33  37  41  46  52  58  51  47  44  42  39  36  36  34  37  36  37  48  49  36  37  40  40  40  40  40  40  40  40  40  4	DISCINAGE (TONS/DAY)  5 19 488 378 192 175 229 298 358 294 344 460 479 379 327 277 200 192 204 171 180 180 180 180 180 180 180 180 180 18	01 Schäde (GFS) 176' 165' 164' 162' 147' 1500 157' 171' 1010 1020 234' 226' 227' 226' 227' 226' 226' 227' 226' 226	MEAN LINE TRATTION (MG/L)  57 37 31 34 36 36 40 42 21 137 129 127 128 121 110 111 110 121 125 226	DISCHARGE (TOMS/DAY)  280 165 133 122 123 139 153 175 174 276 834 403 307 409 550 612 717 843 875 627 638 1000 1550 1900 2220	CISCHARGE (USE) 2550 2647 2340 2340 2340 2340 2341 2690 2690 2690 2757 2810 2090 2090 2090 2090 2090 2090 2090 20	WFAN CONCETT (NO CONCETT (NO CONCETT) (NO CO	### ##################################
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	DISCHRAGE (CFS)  32 5C 28 7C 28 7C 28 4C 28 4C 29 4C 2	YEAN CONCENT (MG/L)  59  63  47  25  16  20  26  29  33  37  41  46  52  58  54  47  44  42  49  36  36  36  37  37  37  38  39  30  31  31  32  32  31  37  77	DISCINAGE (TONS/DAY)  5 19 488 378 192 1175 229 298 358 294 374 441 460 479 379 327 277 200 192 204 171 150 152 143 14c 229 303 353	01 Schäde (CFS) 176' 165' 165' 165' 162' 167' 171' 1610' 1620 234' 226' 227' 226' 2190' 1800' 206' 244' 264' 264' 264' 264' 264' 264' 26	MEAN LINE TRATTION (PG/L)  59 37 31 34 36 36 36 37 40 40 41 132 137 129 127 128 121 111 111 111 111 112 120 236 246 296	DISCHARGE (TOMS/DAY)  2RU 165 133 122 123 139 153 175 174 276 834 463 307 479 55c 632 717 843 870 627 6.03 155c 1900 7000 2270	ETSLHARGE (CES) 2550 2647 2340 2340 2340 2340 2340 2340 2340 2340	VFAN CONCETT (MGZ/L)  326 356 327 274 276 212 234 256 161 3146 177 177 128 1156 177 177 177 177 177 177 177 177 177 17	### ##################################

# 09261000 GREEN RIVER NEAR JENSEN, UTAH--Continued

# SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		APRIL			MAY			JIMF	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEM- TRATION (MG/L)	SEDIMENT DISCHARGE (TOWS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENT TRATION (MG/L)	SELIMENT DISCHARGE (TONS/DAY)	MEAM DESCHARGE (CFS)	MF44 CDMCE - TR4TION (MS/L)	SEDIMENT DISCHARGE (TO SS/DAY
1 2 3 4 5	2040 2660 231 2940 2480	197 171 156 133 114	1030 1230 973 1060 763	677.0 5470 423.2 405.0 523.4	1644 1111 747 504 1070	33000 16433 8533 5516 1510 J	1500 1470 12300 1060 1790	111 630 631 593 555	45000 33300 26500 17000 16300
6 7 8 9	2160 3120 3870 4920 4850	97 4500 591c 5530 5170	566 37900 61800 73500 67700	7796 9950 11500 13000 11300	2290 2370 2465 1886 1440	48200 63700 76400 6600J 4390J	11403 12600 12800 12000 12000	566 577 589 597 635	1747-5 1960-3 21400 19300 21100
11 12 13 14	5190 4560 5210 5460 4681	404. 3169 2470 1799 1301	56500 38900 34700 26400 16400	9512 9283 10400 12400 13603	1190 1260 1440 1560 1690	28233 31600 40433 52250 59363	14200 13900 18400 15500 12500	1027 1713 2903 2107 1506	39100 73400 144000 87900 56610
16 17 18 19 20	4429 3870 4020 3510 3410	799 491 385 302 237	9540 5130 4180 2860 2180	12405 13600 11800 15600 17700	1830 1980 2157 2330 2520	61300 96700 68500 98100 120000	11500 1130 10800 11100 11700	393 537 655 799 641	27900 16400 1910) 23900 21200
21 22 23 24 25	4100 3720 3790 2540 3310	332 464 381 313 257	3680 4660 3900 2150 2300	16600 19200 19800 19700 18600	2100 1760 1470 1220 1020	165000 91200 78600 64900 51200	11800 11807 12100 12460 11800	514 412 44 - 47) 496	164 10 13100 14400 15700 15800
26 27 28 29 30 31	2420 2510 4140 7200 8520	211 173 270 317 2400	1380 1170 30200 61600 55200	17303 17203 17200 17500 17600 16000	1070 1130 1130 1130 1120 1120	511000 52500 52500 53700 53800 48400	11900 11800 11800 10800 10300	524 416 33 262 37	16500 13300 10300 7640 10300
TUTAL	117920		61.9552	40398		1691840	3743cC		866340
		JULY			AUGUST			SEPTEMBER	
OAY	MEAN PISCHARGE (CES)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CES)	MEAN COMCEN- TRATION (MG/L)	SEDIMENT FISCHARGE (TONS/DAY)	MLAN DISCHARGE (CFS)	MEAN CUNCE :- TRATION (MS/L)	SEETMENT DISCHARGE LTONS/DAY
1 2 3 4 5	9917 9330 8300 7750 6710	475 405 345 294 250	12700 9870 7730 6150 4530	2940 2670 240 - 2500 2500	135 96 57 39 20	1070 692 369 263 176	2330 2560 2680 2490 2210	5 74 84 96 245	329 511 608 645 1460
6 7 8 3	6280 6240 5930 5790 5390	213 302 428 381 339	3610 5390 6850 5963 4933	2967 2937 2880 2970 3390	43 72 93 121 157	344 570 723 970 1440	2180 1940 2185 221c 2490	624 1590 122 938 27.	1670 8330 6850 1600 1F20
11 12 13 14	5130 5060 4700 4420 4250	459 622 843 465 256	6360 8530 10730 5550 2943	326. 3130 2810 2830 3260	116 85 132 204 108	1020 727 1000 1560 951	2613 3190 3530 2370 2240	78 157 323 657 24	550 1370 2640 4210 1450
16 17 18 19 20	4050 4030 4170 3950 3650	157 96 121 152 191	1720 1040 1360 1620 1880	2740 2130 2450 2951 2821	57 30 38 48 46	422 173 251 382 350	2510 2559 2610 2210 2520	85 63 45 44 41	596 449 334 263 272
21 22 23 24 25	3220 3510 3720 3580 4050	240 301 148 73 74	2090 2850 1490 706 809	3480 3020 2570 2490 2740	44 31 21 15 25	413 253 146 101 185	211, 2187 214, 2610 2800	37 33 29 26 24	2]1 194 168 163 181
26 27 28 29 32	4090 3130 3040 3350 3270 3130	74 75 105 147 160 174	817 634 862 1333 1410 1470	325° 3550 316° 2930 235° 1985	43 40 47 43 45	351 3c3 341 332 273 241	2690 2480 2190 2551 2990	22 21 18 31 53	160 134 176 213 428
	152830		123558	88040		16472	73450		43978
TOTAL									

## 09261000 GREEN RIVER NEAR JENSEN, UTAH -- Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: ..., BUTTI M WITHURAWAL TURE; C. CHEMICALLY DISPERSED; N. 19 MATIVE MATER; P. PIPET; S. SITYE; V. YISUAL ACCUMULATION TURE; M. IN DISTILLED MATER)

			WATER TEM- PERA-				PERCENT	FI	ነናዩ ፕ	HAN T	PARTI THE ST			LIMET	(۲۶۶	there	CATEU	METHOD OF ANALY-
	DATE	TIME	TURE ( C)	(CFS)		(TONS/DAY)	.602 .	04	. V. 8	.016	. ^31	• 11 t 2	.125	.250	. باد ،	1.00	2.3	212
OC T	14, 1969	1225	5.0	1470	194	1869	21	25				46	66	190				VPWC
OCT	22	150.	9.	2520	192.	13101	67	79		74		1.7						SPAC
NOV	14	1225	6.5	2447	122	804	3.2	18				67	78	97	luc			VPWC
DEC	12	1125	3.€	3590	242	2350												
JAN	22, 197	124`	2	1760	34	167												
Fga	19	1330	6.0	2100	42	238												
MAK	12	1145	4.0	2260	150	915	43	5¢				73	52	79	100			VP.C
APR	17	1350	6.5	33UC	641	5710	39	47		6.2		74	RA	99	10			VPWC
14AY	13	1290	12.0	11430	1660	51100	27	28				60	76	93	16.			VPLC
HIM	15	1125	14.	12300	1500	49800	42	45				75	88	9 <b>R</b>	1(,			VPWC
JUL	13	1 14 1	19.	4400	843	10,50	50	63				100						SPHC
IUL	15	1015	19.0	399r	258	2780	32	35				85	95	99	lú.			VPWC
406	14	1150	18.0	2170	204	1207	73	84				10.1				~-		SPKC
FP	16	1625	13.	1680	86	390	65	78				190						SPEC

## 09302000 DUCHESNE RIVER NEAR RANDLETT, UTAH

LOCATION.--Lat 40°12'57", long 109°47'05", in SE\u00e45E\u00e4 sec.17, T.3 S., R.2 E., Uintah meridian, Uintah County, at gaging station 0.2 mile downstream from Uinta River, 1.2 miles southeast of Randlett, and 6.5 miles southeast of Fort Duchesne.

DRAINAGE AREA. -- 3,920 sq mi, approximately.

PARIOD OF RECORD, --Chemical analyses: December 1950 to September 1951, November 1956 to September 1969 (daily), October 1969 to September 1970 (monthly), Water temperatures: December 1950 to September 1951, November 1956 to September 1970.

#### EXTREMES.

temss.--1989-70: Specific conductance: Maximum daily, 3,190 micromhos Apr. 15; minimum daily, 711 micromhos May 30. Water temperatures: Maximum, 22.0°C on several days during June to August; minimum, freezing point on many days during winter months.

TIME

DATE

CHARGE

(CES)

(\$1021

(MG/L)

Period of record:
Dissolved solids (1950-51, 1956-69): Maximum, 3,330 mg/l Aug. 1-6, 9-26, 29, 30, 1961; minimum, 209 mg/l June 22-24, 1965.
Hardness (1956-69): Maximum, 1,020 mg/l May 1-15, 1959; minimum, 133 mg/l June 22-24, 1965.
Specific conductance (1950-51, 1956-60, 1961-70): Maximum daily, 4,490 micromhos Aug. 24, 1960; minimum daily, 291 micromhos May 29, 1951.
Water temperatures: Maximum, 27.0°C July 15, 1968; minimum, freezing point on many days during winter periods.

OIS-SCLVEO CAL-CIUM

(CA)

(MG/L)

(MG/L)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 DIS-SOL VED MAG-NE-SILM (MG)

SODIUM

(NA) (MG/L)

PO-TAS-SIUM (K)

(MG/L)

BICAR+ BONATE (HCO3)

IMG/L )

CAR-BONATE SULFATE (CO3) (SO4)

(MG/L)

(SQ4)

DIS-SOLVED FLUO-RIDE (F)

(MG/L)

CHLO-RIOE (CL)

09 27	1050 1515	137 443		144		231 154	3.7 3.0	376 325			38 71	1.0
ACV. 24	1430	356		99	64	142	2.5	329	0 4	12	74	
DEC .	1445	365		96	61	124	2.0	310	0 3	90	82	
JAN . 12	1420	1240	10	77	41	81	2.1	249	0 2	67	42	.4
FEB.								297			39	.6
C9 MAR.	1445	698	12	95		178	2.5					
APR.	1355	219	7.4	88	56	133	1.9	271	0 4	32	62	•5
16	1300	68	16 1	185 1	18	429	3.6	394	0 11	50 2	32	1.0
11	1340	103	11 1	137	75	285	4.1	368	0 7	60 1	26	.8
JUL Y 14	1510	145	11 1	104	68	213	4.2	300	0 5	82 1	11	.8
AUG. 17	1410	53	11 1	135	83	341	4.1	329	4 8	145 1	64	.9
SEP . 16	1130	69	9.2	132 1	ıcz	320	4.3	290	24 9	30 1	55	1.1
10	1130	07										
DATE	NETRATE {N} {MG/L}	(8)	DUE AT 180 C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	SOLIDS (TUNS PER	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	
09				1570	2.34		760 513	452 246	3.6 3.0	2180 1470	7.9 8.0	
27 NCV.				1090	1.48							
24 CEC.				956	1.46	1030	512	2 42	2.2	1480	7.8	
JAN.			995	907	1.35		492	238	2.4	1 390	7.4	
12		260	655	644	. 89	2190	361	157	1.9	977	8.0	
FEB. 09		270	1120	1070	1.52	2110	489	2 45	3.5	1610	8.1	
MAR. 11		- 140	972	914	1.32	575	450	2 28	2.7	1 340	8.2	
APR. 16		100	2480	2330	3.37	455	948	625	6.1	3160	8.1	
MAY				1580	2.15	467	650	348	4.9	2200	8.2	
JULY			-				540	294	4.0	1740	8.2	
14 ALG.				1240	1.77			402	5.7	2400	8.3	
17 SEP.	60	1100			2.49				5.1	2450	8.7	
16	. 2.4	1100	1910	1820	2.60	356	750	471	5.1	2450	0.1	

AVG

7.0

2.0

0.0

0.0

0.5

#### 09302000 DUCHESNE RIVER NEAR RANDLETT, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	372	CIPIC CON	DUCTANCE	THICKOHIC		ILY MEASU		DC TOBER 1	O 10 3L	TENDER E		
DAY	ncr	VOV	DEC	JAN	FER	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2190	1320	1140	1250	1250	1230	2587	2570	921	1810	2380	2760
2	2120	1340	1100	1240	1150	1250	2600	2520	929	1860	2340	2570
3	2290	1370	1750	1290	1150	1310	2680	2590	883	1950	2360	2630
4	2260	1430	1070	1390	1110	1270	2610	2810	907	1560	2370	2810
5	2300	1490	1073	1410	1060	1320	2639	2780	865		2500	2867
6	2190	1520	1090		1060	1270	2880	2340	864	1540	2240	
7	2179	1550	1190	1250	1100	1310	2800	2657		157)	2330	1927
9	2180	1500	1140	1210	1090	1300	2700	2570		1480	2100	1640
q	2110	1523	1183	1100	1170	1350	2730	2150	1690	1540	2200	1940
1.0	2050	1550	115)	1050	1240	1320	2630	2130	1710	1589	2460	2270
11	2130	1540	1200	1730	1240	1310	2820	2290	1890	1340		2230
12	2100	1650	1221	978	1287	1390	2913	2423	1830	1440	2569	2210
13	1940	1530	1130	972	1290	1620	3060	2800	1650	1570	2410	2383
14	1850	1550	994	954	1340	1770	3930	2710	1260	1720	2340	2422
15	1800	161)	1010	975	1370	1970	3190	2630	976	1860	2360	25 90
16	1530	1790	1050	978	1290	2010	3170	2810	1220	1890	2190	2490
17	1533	1810	1077	1923	1290	1990	3140	2770	1270	1940	2480	2390
18		1810	1093	1020	1289	2170	3080	2750	1220	1993	2500	2230
19		1360	1087	1930	1300	2140	3:040	2280	1349	2100	2370	2149
20	1640	1750	1087	1070	1270	2290	2790	1770	1270	2090	2290	2240
21	1490	1613	1147	1110	1250		2757	1330	1250	2050	2500	2310
22	1500	1457	1157	1080	1260	2230	2730	1750	1120	2140	2530	2280
23	1450	1300	1170	1380	1220	2300	2733	2290	973	2260	2670	2290
24	1473	1297	1197	1117	1180	2440	2832	2430	929	2360	2870	2230
?5	1440	1273	1257	1120	1170	2560	2940	2300	929	2310	2670	2300
2.5	1440	1100	1251	1160	1220	2540	291 )	1720	1190	2330	2520	2270
27	1430	1189	1300	1150	1250	2560	2990	1190	1270	2240	2550	2290
29	1410	1260	1310	1180	1250	2650	3020	715	1520	2200	2460	2340
29	1450	1220	143)	1230		2730	2920	714	1630	2330	2500	2320
30	1390	1130	1413	1280		2590	2500	711	1690	2410	2540	2340
31	1470		137)	1300		2610		785		2210	2647	
AVG	1900	1433	116)	1130	1220	1890	2850	2170	1250	1920	2440	2330

#### TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT) SEP OC T FFR MAR APR JUL AUG DAY NOV DEC JAM MAY JUN 13.0 13.5 10.0 8.0 7.0 5.0 5.0 3.0 7.5 8.0 10.0 10.0 12.0 12.5 15.0 15.0 15.0 20.0 22.0 22.0 22.0 20.0 18.5 17.0 16.0 0.0 0.0 5.0 4.5 2.0 1.9 4.0 4.0 3.5 0.0 17.0 2345 0.0 0.0 20.0 3.0 0.0 2.0 0.0 0.0 0.0 4.0 5.5 12.0 20.5 22.0 16.0 19.5 20.5 21.0 21.5 20.0 7.0 7.0 9.0 9.0 4.0 5.0 4.0 4.0 3.5 5.0 3.5 4.0 4.5 5.3 8.5 7.0 5.5 8.3 0.0 0.0 0.0 15.7 22.0 7 14.0 13.0 14.0 15.5 15.5 0.0 0.0 13.0 9.0 10.0 22.0 21.0 20.0 19.0 ---10 9.0 3.5 15.0 0.0 11.0 15.5 12.5 15.0 15.0 20.0 20.5 21.0 21.0 20.5 4.0 4.0 4.5 5.5 0.0 0.0 0.0 0.0 0.0 0.0 2.0 10.0 15.0 11 12 13 14 20.0 20.0 19.5 20.0 4.0 4.0 3.0 3.0 0.0 2.0 3.0 4.0 6.0 9.0 5.5 6.9 5.0 16.0 15.0 15.0 12.0 15.0 12.0 12.0 0.0 0.0 14.0 12.5 13.0 13.5 14.0 6.° 6.0 5.3 2.0 0.0 0.0 0.0 0.0 0.0 5.0 4.5 3.5 0.0 5.0 9.0 8.0 6.0 6.0 20.0 20.0 19.1 0.0 11.0 15.5 20.0 16 17 13 19 20 0.0 20.5 21.0 20.0 20.0 0.0 15.0 15.0 16.0 13.0 16.0 17.5 18.0 19.0 20.0 L5.0 0.0 4.0 0.0 0.0 1.0 5.5 6.3 5.5 7.5 9.3 0.0 13.5 13.5 16.5 13.0 22.0 21.0 20.0 20.0 19.0 19.5 18.0 20.0 19.0 12.0 12.0 11.0 12.0 9.0 0.0 21 22 23 24 25 0.0 0.0 20.9 1.5 20.0 0.0 5.0 4.0 5.0 3.5 0.0 5.5 5.3 0.0 0.0 0.0 0.0 1.0 8.0 16.0 20.0 20.5 1.0 2.0 2.7 8.0 4.0 5.0 9.0 21.0 26 27 29 29 30 0.0 21.0 20.5 6.0 7.5 6.7 5.0 4.0 0.0 0.0 0.0 2.0 2.5 4.0 10.5 9.0 6.0 15.5 15.0 15.0 13.7 22.0 19.0 20.0 15.0 20.0 20.0 20.0 20.0 8.0 0.0 0.0 2.0 6.5 21.0 12.0 0.0 31 0.0 \_\_\_ 12.0 20.5 20.0

3.5

6.5

12.5

17.0

20.5

20.0

13.5

## 09306500 WHITE RIVER NEAR WATSON, UTAH

LOCATION.--Lat 39°59', long 109°11', in sec.2, T.10 S., R.24 E., Uintah County, at bridge on State Highway 45, 350 ft upstream from gaging station, about 1 mile downstream from Evacuation Creek, and 7 miles north of Watson.

DRAINAGE AREA, -- 4,020 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: December 1950 to September 1969 (daily), October 1969 to September 1970 (monthly).
Water temperatures: December 1950 to September 1970;

#### EXTREMES.

REMES.--1969-70: Specific conductance: Maximum daily, 1,440 micromhos Oct. 19; minimum daily, 318 micromhos May 29. Water temperatures: Maximum, 20.0°C Aug. 17; minimum, freezing point on many days during February and March.

Period of record:
Dissolved solids (1950-54, 1955-69): Maximum, 2,380 mg/l July 21, 1966; minimum, 209 mg/l May 23, 1964.
Hardness (1954-69): Maximum, 1,410 mg/l Aug. 4, 1955; minimum, 125 mg/l Mar. 4, 1969.
Specific conductance: Maximum daily, 4,450 micrombos Aug. 4, 1955; minimum daily, 318 micrombos May 29, 1970.
Water temperatures: Maximum, 31.0°C Aug. 8, 1954; minimum, freezing point on many days during winter periods.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOL VED CAL- CIUM (CA) (MG/L)	DIS- SDLVED MAG- NE- SIUM (MG) (MG/L)	SCDIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVEO FLUG- RIDE (F) (MG/L)
cct.												
13 28 NOV.	1100 1100	511 497	15 9.1	68 68	23 24	73 70	1.7 1.8	225 219	0	154 150	56 55	-4
25 CEC.	1020	4D5		72	24	52	1.7	237	0	144	30	
11	1030	490		71	30	60	1.7	265	0	169	36	
JAN . 12 FEB .	0955	1470	16	89	31	72	2.1	300	0	185	34	.3
09	0905	410	13	68	25	61	2 • 2	231	0	171	35	.3
MAR. 11 APR.	1050	384	11	79	31	74	2.0	320	0	197	34	.3
16	1055	419	16	72	28	64	1.9	253	5	185	27	.4
12 JLNE	1040	1520	12	56	20	31	1 • 6	293	0	90	14	.3
11	1330	394D	9.3	45	20	46	2.6	159	0	103	35	.3
14	0855	846	13	59	18	29	1.9	201	0	100	16	.3
ALG. 17	0910	451	14	63	24	47	1.6	226	4	138	24	.3
SEP. 15	1040	518	11	67	22	52	2 • 2	208	12	148	22	.4

OATE	NITRATE NO3 (MG/L)	DIS- SOLVED BORDN (8)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLICS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI+ FIC CONO- UCTANCE (MICRO- MHOS)	PH (UNITS)
CCT.											
28	3.2	90	517 509	505 486	.70 .69	713 683	266 267	82 87	2.0	812 784	7.6 8.2
NOV.						083		•			•••
ręć:			487	441	.66	533	277	83	1.4	739	8.1
			537	504	.73	710	300	63	1.5	812	7.7
JAN. 12	.7	60	592	578	. 61	235D	351	105	1.7	862	7.9
FEB.				3.0					•••		
09	1.0	130	496	491	.67	549	272	83	1.6	752	8.1
₩AR. 11	.4	80	568	586	.77	589	324	62	1.8	637	8.2
APR.	• • •	30	,,,,	300	• • •		52.	-			
16	• 2	60	519	524	.71	587	294	80	1.6	785	8.4
PAY	5.3					133D	222	0			8.1
JUNE	5.5	40	325	375	.44	1330	223	U	. 9	551	8.1
11	1.8	60	352	341	.48	3750	194	64	1.4	575	7.8
JULY											
14	• 0	40	360	336	•49	824	222	57	• 6	540	7.8
ALG. 17	. 2	50	434	427	.59	528	254	62	1.3	660	8.4
SEP.		,,,	7,54	421	• • • •		231		•••		
15	1.0	40	457	440	•62	639	258	68	1.4	681	8.6

DIS- 01S-

## 09306500 WHITE RIVER NEAR WATSON, UTAH--Continued

			U:	306300	WHITE KIV	ER NEAR W	TISON, UT	AHCOULT	nueu			
	SPE	CIFIC CON	IDUC TANCE	(MICROMHO		5°C), WAT		OCTOBER 19	969 TO SE	TEMBER 1	970	
DAY	OCT	NOV	DEC	JAN	FEB	MAK	APR	MAY	JUN	JUL	AUG	SEP
1	89د	699	858	832		773	713	608	339	378		737
2	673	711	833	871	910	797	851	650	338	388		743
3	675	709	830		919	783	822	690	3 60	422	669	746
4	651	732	746		868	799	825	698	359	436	698	810
5	710	724	719	873	831	797	827	693	372	452	722	737
6	672	761		839	836	819	806	656	341	466	696	727
7	652	835		787		837	838	598	3 3 2	505	672	889
d	551	776	665	826	781	837	900	548	323	515	741	744
10	655	767 701	736 785	847	773	847	861 831	494 470	350 352	494 532	687 681	676 651
10				852	736	866						
11	700	667	813	796	775	840	822	490	689	673	658	659
12	767	719	811	858	782	823	807	528	5 0 5	640	667	664
13	817	744	869	782	780	817	768	514	487	535	665	666
14	797	737	705	733	719	835	765	468		543	675	697
15	771	733	702	687		974	785	432	420	532	720	708
16	856	733	702	683		846	770	436	390	536	681	664
17	632	749	682		746	878	790	432	366	588	675	644
18	927	608	769		832	878	779	443	374	591	723	642
19	1443	690	748	703	884	854	949	417	3 5 3	594	811	646
20	970	631	717	703	780	871	795	379	3 36	604	703	651
21	a57	624	705	714	724	857	795	375	3 34	611	707	640
22	812	719	693	660	777	837	819	366	344	601	704	640
23	817	759	719	680	811	826	817	342	340	666	692	645
24	311	696	938	735	745	821	826	325	356	735	674	640
25	743	710	751	758	704	816	828	326	374	660	674	655
20	743		779	718	741	856	867	333	374	649	683	657
27	302	734		671	730	868	882	331	372	657	772	647
28	771	743		756	782	846	856	322	355	680	714	638
29	744	745	957	791		856	704	318	363	688	750	636
30	694	798	935	762		819	629		377	641	939	638
31	670		926			832		327		725	732	
AVG	781	725	781	766	790	839	811	467	378	572	710	685
		754	DEGATURE	(00) 05 11		FD VEAD 0		=0				
		ICM	PERATURE	(-C) OF W	(ONCE-DA	ILY MEASU	CTUBER 19	164 IU 2E	IEMBER 19	110		
DAY	UCT	NOV	DEC	MAL	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	5.0	3.0									
2	11.0	2.0	2.5	3.0 4.5	0.0	0.0	3.0	7.0	7.0	12.5		13.5
3	10.0	2.0	2.0		0.0		3.5	9.0	7.5	12.5		13.5
4	9.0	2.0	3.0			0.0	3.5	9.0	8.5	13.5	13.5	13.5
5	8.0	2.0	2.5	4.0	0.0	4.0	3.0	10.0	9.0		13.5	13.5
						4.0	2.0	12.5	10.0		13.5	13.5
6 7	6.0	2.0		4.0	0.0	0.5	4.5	9.0	11.0	13.5	13.5	12.5
	0.0	2.0		3.0		1.0	4.5	10.0	9.0	13.5	13.5	13.5
9	6.0	2.0	4.0	3.0	0.0	0,0	4.5	10.0	10.0	13.5	13.5	13.0
	7.0	1.0	4.0	3.0	0.0	1.0	9.0	9.5	9.5	13.5	12.0	12.0
10	7.0	1.0	3.0	3.0	0.0	0.0	7.0	9.0		13.5	13.5	15.0
11	5.0	1.0	2.5	3.0	0.0	1.0	7.0	9.0	7.0	13.0	13.5	15.5
12	3.0	2.0	3.0	3.0		0.0	4.5	10.5	9.0	13.0	13.5	14.5
13	2.0	2.0	3.0	3.0		0.0	7.0	10.0	12.0	13.5	13.5	13.5
14	2.0	1.0	3.0	3.0	0.0	2.5	5.5	10.0		13.5	13.5	15.5
15	4.0	1.0	3.0	3.0		3.0	9.5	9.0	10.0	13.5	14.0	14.5
lo	5.0	1.0	3.0	3.0		3.5	7.5	10.0	10.0	13.5	14.5	13.5
17		1.0	3.0		1.0	2.5	3.5	10.0	10.0	13.5	20.0	13.5
18	5.0	2.0	3.0		1.0	0.5	4.0	10.5	12.5	14.5	18.5	13.5
19	4.0	2.0		3.0		2.5	4.5	11.0	10.5		15.5	13.5
20	3.0	2.0	5.0	3.0	0.0	1.0	4.5	11.0	11.0	13.5	13.5	13.5

0.0 0.0 0.0 0.0

0.0

---

1.0 1.0 1.0 2.5 1.0

2.5 1.0 1.5 ---4.0 1.0

1.5

11.0 12.0 13.0 14.5 13.0

12.5 14.5 12.0 12.5

13.5

11.0

5.5 5.5 5.5 6.0 7.0

8.0 7.0 7.0 7.0 4.5

5.5

13.5 13.5 13.5 13.5

18.5 13.5 13.5 14.5 14.5 14.0

14.0

13.5 13.5 13.5 13.5

11.0 10.0 10.0

9.5

13.0

13.5 13.5 13.5 13.5

13.5 14.5 13.5 13.5 13.5

13.5

10.5 13.0 12.0 12.5

10.0 11.0 12.0 12.0

10.5

4.0 2.0 4.0 3.5 5.0

3.0

6.0 5.0 6.5

3.5

3.0 3.0 3.0 3.0 3.0

3.0 3.0 3.0 3.0

3.5

2.0 2.0 2.0 2.0

2.5 2.5 2.5 2.5

2.0

3.0 4.0 4.0 6.0 5.0

4.0 5.0 5.0 4.0 3.0 3.0

5.5

AVG

## 09314500 PRICE RIVER AT WOODSIDE, UTAH

LOCATION.--Lat 39°15-50", long 110°20'45", in SE4 sec.9, T.18 S., R.14 E., Emery County, at gaging station on left downstream wingwall of old highway bridge, 200 ft downstream from railroad bridge at Woodside, and about 22 miles upstream from mouth.

DRAINAGE AREA. -- 1,500 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: December 1946 to September 1949, February 1951 to September 1969 (daily), October 1968 to September 1970 (monthly).

Water temperatures: February 1951 to September 1959, November 1961 to September 1963, October 1964 to September 1970.

#### EXTREMES . -- 1969-70:

Specific conductance: Maximum daily, 7,100 micromhos May 9; minimum daily, 1,760 micromhos Sept. 7.
Water temperatures: Maximum, 25.0°C July 10, 11; minimum, freezing point on many days during November to Feb-

Period of record:

eriod of record:
Dissolved solids (1951-69): Maximum, 8,220 mg/l Dec. 11, 1951; minimum, 592 mg/l May 21-30, 1952.
Hardness (1951-69): Maximum, 3,010 mg/l Dec. 11, 1951; minimum, 310 mg/l May 1-7, 1969.
Specific conductance: Maximum daily, 8,540 micromhos Dec. 11, 1951; minimum daily, 814 micromhos June 1, 1952.
Water temperatures: Maximum, 32.0°C July 10, 11, 1954; minimum, freezing point on many days during winter periods.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SID2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SCDIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SUL FATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SDLVED FLUO- RIDE (F) (MG/L)
cct.												_
01	1115	62	2.7	208	204	528	8.3	284	0	2180	63	.9
08	1515	74	1.6	192	179	496	8.1	303	0	2000	56	
JAN.												
07	1150	25		329	360	865	11	559	0	3440	102	
FE8.												
C6	1030	54	6.7	205	165	460	6.4	409	0	1780	58	.4
MAR.												
09	1535	B3	. 8	206	212	603	7.4	367	0	2200	70	.3
APR.												
09	1515	В6	1.9	190	171	440	7.1	372	0	1700	63	.6
HAY												
Cl	0730	50				600				2200		
JUNE												
02	1110	175	7.3	132	107	301	6.6	311	0	1080	34	•5
03		179	10	136	103	293	5.9	286	8	1120	14	.5
26	1230	122	5.8	144	136	369	7.7	286	0	1430	39	.4
JLLY		•										
C7	0700	110	10	290	164	450	14	330	0	2090	35	.7
29	1330	100	7.7	293	212	381	10	939	4	1600	44	.6
ALG.												
06	1415	77	7.5	188	127	368	12	271	0	1510	39	.7
SEP.	- /			-50		- 50						
01	1735	95	6.6	190	139	403	8.6	265	0	1550	45	.5

DATE	NITRATE (N) (MG/L)	DIS- SOL VED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOL VED SOL IDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
cct.											
01		370	3530	3340	4.80	591	1360	1130	6.2	3770	8.0
08			3250	3080	4.42	649	1210	965	6.2	3550	7.9
JAN.											
07			563C	5380	7.66	380	2300	1840	7.B	5700	7.5
FEB.											
06		300	3070	2890	4.18	448	1190	8 5 5	5.8	3370	7.9
MAR.											
09		340	3760	3480	5.11	843	1380	1080	7.0	4120	7.9
APR.		200		2242				8 75	5.6	3360	8.0
09 MAY		300	2770	2760	3.77	643	1180	9 13	2.0	3360	8.0
01										4130	
JUNE										4130	
02		230	2090	1830	2.84	988	770	515	4.7	2410	7.9
03		220	1910	1840	2.60	923	765	517	4.6	2270	B.5
26	-47	310	2470	2280	3.36	814	920	685	5.3	2810	8.2
JULY											
07	-50		3460	3220	4.71	1030	1400	8 59	5.2	3740	7.5
29		280	2650	3020	3.60	715	1600	824	4.1	2930	8.3
AUG.											
06		360	257C	2390	3.5C	534	992	54B	5.1	2940	7.6
SEP.									_		
01	1.2	310	264C	2480	3.59	677	1040	827	5.4	3010	8.2

01S- DIS-

# 09314500 PRICE RIVER AT WOODSIDE, UTAH--Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					(ONCE-DA	ILY MEAS	JREMENT)					
DAY	OC T	VCM	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3750	3840	4860	5190	3830	3550	3480	4130	2370	3200	2850	3070
2	3 9 3 0	3940	4590	5390	3730	3780	3290	6240	2380	3400	3500	3320
j	4000	3510	4450	5580	3560	3880	3680	6190	2270	3210	2980	3120
4	3890	3630	4220	5760	3580	4220	3 980	6070	2290	3150	3200	3030
5	3560	3820	4200	5760	3550	5150	4200	6190	2320	3020	3280	3050
6	3690	3990	4330	5500	3440	4830	4020	5910	2340	3200	2850	3610
7	3610	3990	4460	5740	3360	4520	3970	4900	2300		3330	L760
8	3620	4150	4700	5680	3420	4290	3790	5380	2500		3070	2190
9	3730	4150	4670	50 90	3400	4220	3600	7100	2860		3060	2680
10	3910	4460	4660	5110	3430	3450	2930	4960	2420	2350	3010	2880
11	3920	3710	5010	4990	3640	3550	3120	5040	2830	2330	3410	3030
12	3870	3670	4600	4990	3720	3810	3090	4560	3720	3310	3420	3210
13	3930	3670	5070	4640	3670	3670	3310	3960	2520	2680	3570	2480
14	4340	37>0	4720	4640	3830	3940	3340	3810	2200	2770	3380	2530
15	4380	4170	4720	4320	3790	3940	3380	3680	2050	3040	3580	2870
lo	4020	3880	4970	4100	4020	3810	4010	3560	1950	3010	3580	4030
17	4150	3890	4330	4090	4280	3440	4360	3890	1940	3040	2290	4250
18	4320	4490	4330	4090	3850	3580	6010	3640	1880	2980	3070	4050
19	4320	4820	4450	3830	3910	4030	6450	3610	1840	3290	3310	3770
20	4310	5160	4270	3840	3890	3740	6120	3330	1790	3080	3270	3580
21	4270	5370	4310	3860	3950	3580	6450	3410	1850	2960	2680	3580
22	3970	5040	4270	3260	3980	3800	5340	3010	1930	3220	2990	3430
23	3 8 1 0	4510	4230	3850	4610	3780	6090	2990	2100	3290	2420	3420
24	3310	4320	4090	3360	4340	3720	5690	3310	2250	3180	2440	3510
25	3940	4090	4060	3410	4340	3510	5660	3670	2340	2890	3020	3300
26	3910	3850	4000	2990	4580	2950	5880	3430	2740	3110	2960	3360
27	3940	3850	4370	3350	4420	2460	6630	3320	2710	2990	3000	3580
28	3930	4130	4210	3560	3680	2610	6520	3130	2820	4970	2960	3570
29	3980	4400	4660	3670		2680	5980	3140	2880	3280	2730	3520
30	+010	4480	4750	3790		4210	4400	3160	3010	2950	2990	3640
31	4060		4960	3870		3350		2660		3010	2830	
AVG	3960	4160	4500	4430	3850	3740	4630	4240	2380	3100	3070	3250

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OC T	VON	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SĔP
1	13.0	4.0	0.0	0.0	0.0	6.0	2.0	5.0	13.0	14.0	20.0	19.0
2	16.0	2.0	1.0	0.0	0.0	3.0	5.0	5.0	14.0	15.0	20.0	16.0
3	15.5	3.0	0.0	0.0	0.0	3.0	5.0	9.0	15.0	16.0	21.0	14.0
4	7.0	1.0	1.0	0.0	0.0	8.0	2.0	10.0	15.0	18.0	21.0	14.0
5	13.5	8.5	0.0	0.0	0.0	9.0	4.0	9.0	16.0	19.0	20.0	16.0
6	6.5	8.0	0.0	0.0	0.0	10.0	5.0	10.0	16.0	19.0	21.0	13.0
7	6.5	6.0	0.0	0.0	3.0	10.0	5.0	10.0	17.0	19.0	21.0	12.0
8	6.5	4.0	0.0	0.0	0.0	10.0	6.0	8.0	14.0	19.0	21.0	13.0
9	7.5	5.0	0.0	0.0	1.0	5.0	5.0	10.0	15.0	19.0	19.0	14.0
10	9.5	9.0	0.0	0.0	4.0	3.0	7.0	10.0	13.0	25.0	17.0	11.0
11	6.5	5.0	0.0	0.0	1.0	5.0	7.0	9.0	9.0	25.0	20.0	13.0
12	4.5	8.0	1.0	0.0	1.5	4.0	5.0	10.0	11.0	21.0	18.0	15.0
13	4.0	8.0	0.5	0.0	2.0	4.0	5.0	11.0	14.0	19.0	18.0	15.0
14	4.5	3.0	1.0	0.0	5.0	10.0	5.0	9.0	13.0	20.0	19.0	12.0
15	4.0	5.0	0.0	0.0	5.0	7.0	3.0	10.0	14.0	17.0	19.0	9.0
16	7.0	7.0	0.0	0.0	1.0	5.0		11.0	13.0	17.0	18.0	9.0
17	4.5	4.0	3.0	0.0	0.0	5.0	6.0	13.0	14.0	18.0	20.0	10.0
18	6.0	0.0	2.0	0.0	2.0	2.0	7.0	12.0	15.0	20.0	19.0	10.0
19	2.0	1.0	3.0	0.0	0.0	3.0	6.0	14.0	15.0	20.0	19.0	10.0
20	3.5	4.0	3.0	0.0	0.0	3.0	4.0	10.0	17.0	20.0	17.0	11.0
21	4.5	0.0	0.0	0.0	3.0	6.0	4.0	11.0	18.0	21.0	16.0	9.0
22	6.5	0.0	0.0	1.0	6.0	4.0	5.0	11.0	19.0	18.0	17.0	7.0
23	7.5	3.0	0.0	1.0	2.0	4.5	5.0	12.0	19.0	17.0	18.0	8.0
24	7.5	0.0	0.0	1.0	2.0	4.0	6.0	12.0	18.0	16.0	18.0	8.0
25	7.5	5.0	0.0	2.0	3.0	5.0	7.0	14.0	19.0	16.0	18.0	6.0
26	6.5	3.0	0.0	1.0	5.0	7.0	8.0	14.0	19.0	18.0	19.0	6.0
27	6.5	2.0	0.0	0.5	0.0	2.0	7.0	15.0	20.0	17.0	18.0	7.0
28	7.5	0.0	0.0	0.0	9.0	2.0	3.0	15.0	15.0	17.0	19.0	12.0
29	4.5	1.0	0.0	0.0		4.0	3.0	15.0	16.0	18.0	20.0	11.0
30	2.5	0.0	0.0	0.0		4.0	4.0	15.0	14.0	20.0	19.0	15.0
31	4.5		0.0	0.0		2.0		11.0		18.0	20.0	
AVG	7.0	3.5	0.5	0.0	2.0	5.0	5.0	11.0	15.5	18.5	19.0	11.5

# 09315000 GREEN RIVER AT GREEN RIVER, UTAH (Irrigation network, pesticide, and radiochemical station)

LOCATION.--Lat 38°59'37", long 110°08'35", in NWINE sec.15, T.21 s., R.16 E., Emery County, at bridge on U.S. Highways 50 and 6 in town of Green River, 0.7 mile upstream from gaging station.

DRAINAGE AREA. -- 40,600 sq mi, approximately (at gaging station).

PERIOD OF RECORD. --Chemical analyses: August 1928 to September 1969 (daily), October 1969 to September 1970. Water temperatures: May 1949 to September 1959, October 1964 to September 1970. Sediment records: May 1930 to September 1970.

## EXTREMES. -- 1969-70:

NEMES. --1969-70:
Specific conductance: Maximum daily, 1,160 micromhos Oct. 22; minimum daily, 338 micromhos June 1, 3.
Water temperatures: Maximum, 23.0°C on several days during July and August; minimum, freezing point on many
days during December to February.
Sediment concentrations: Maximum daily, 7,700 mg/l May 10; minimum daily, 69 mg/l Sept. 29.
Sediment discharge: Maximum daily, 289,000 tons June 16; minimum daily, 588 tons Sept. 30.

#### Period of record:

Dissolved colids (1928-69): Maximum, 3,440 mg/l Dec. 1-3, 1967; minimum, 194 mg/l June 21-30, 1933. Hardness (1928-69): Maximum, 1,880 mg/l Dec. 1-3, 1967; minimum, 128 mg/l June 21-30, 1933. Specific conductance (1941-70): Maximum deily, 3,250 micromhos Dec. 1, 1967; minimum deily, 272 micromhos

May 13, 1956.
Water temperatures (1949-59, 1965-70): Maximum, 30.0°C Aug. 13, 1958; minimum, freezing point on many days

during winter periods, Sediment concentrations: Maximum daily, 66,000 mg/l July 11, 1936; minimum daily, 20 mg/l Sept. 27, 1956. Sediment discharge: Maximum daily, 2,230,000 tons July 11, 1936; minimum daily, 54 tons Sept. 27, 1956.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

CATE	TIME	OIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- Clum (CA) (MG/L)	OIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO~ TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
CCT.					34	95	3.1	205	0	317	29	
08	1105 1145	3130 3100	4.0 4.1	68 68	34 34	87	2.6	204	ŏ	2 75	30	• 3
NCV.	1145	3100	4.1	• •	34	٠,						
13 CEC.	1155	3770	6.8	66	40	81	2.7	218	0	275	33	•5
II	1650	3540	6.3	66	36	72	2.5	218	0	2 38	27	.5
08 FEB.	1350	2740	6.5	74	43	88	2.8	253	0	300	30	•5
06 MAR.	1520	2600	8.1	69	35	84	2.7	218	0	265	29	-4
C9	1330	3400	10	72	38	94	2.9	275	0	278	32	.4
09	1205	3000	8.4	66	37	91	3.1	234	3	266	29	.4
13	1330	10900	8.4	48	19	31	3.3	323	0	95	8.7	•3
16	1400	16300	9.4	54	34	40	2.2	382	0	98	16	•5
C9	1250	9290	7.9	47	21	47	2.4	271	0	1 44	13	.3
06	1220	3320	6.9	64	28	79	3.2	253	3	236	24	•7
18	2010	3400	8.0	69	28	84	4.4	202	0		25	•5 •5
21	1515	3080	8.0	66	31	77	4.2	211	0	255	22	•6
24	1540	3570	7.5	69	29	80	4.0	199	0	2 5 7	25	•0
SEP. 09	1115	3160	5.3	72	35	83	3.2	299	4	2 55	27	-4
				DIS-	DIS~							
DATE	NI TRATE (NU3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AO- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
	(NO3)	PHATE (PO4)	SOL VED BORON (B)	SOLVED SOLIDS (RESI- DUE AT 180 C)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	SOLVED SOLIDS (TONS PER	NESS (CA, MG)	CAR- BONATE HARD- NESS	AO- SORP- TION	FIC COND- UCTANCE (MICRO-	
act.	(NO3) (MG/L)	PHATE (PO4) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SDLVED SOLIDS (TONS PER DAY)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO-	
OCT.	(NG3) (MG/L)	PHATE (PO4) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	SOLVED SOLIDS (TONS PER	NESS (CA, MG)	CAR- BONATE HARD- NESS	AO- SORP- TION	FIC COND- UCTANGE (MICRO- MHOS)	(UNITS)
OCT. 08 C8	(NO3) (MG/L)	PHATE (PO4) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
OCT. O8 C8 NGV. 13 DEC.	(NO3) (MG/L) 2.7 2.1	PHATE (P04) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C; (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY) 5620 5600	NESS (CA, MG) (MG/L) 310 310	CAR- BONATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 928 935	(UNITS) 7.5 7.8
OCT. 08 C8 NGV. 13 DEC. 11 JAN.	(NU3) (MG/L) 2.7 2.1 2.1	PHATE (PO4) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 665 669	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 651 604	SOLVED SOLIDS (TONS PER AC-FT) .90 .91	SOLVED SOLIDS (TONS PER DAY) 5620 5600	NESS (CA, MG) (MG/L) 310 310 328	CAR- BONATE HARD- NESS (MG/L) 142 143	AO- SORP- TION RATIO 2.3 2.1	FIC COND- UCTANCE (MICRO- MHOS) 92B 935	(UNITS) 7.5 7.8 7.8
OCT.  O8  C8  NGV.  13  DEC.  11  JAN.  C8  FEB.	(NO3) (MG/L) 2.7 2.1	PHATE (P04) (MG/L)	SOL VED BORON (B) (UG/L)  160 18D	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 665 669 641	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 651 604 614	SOLVED SOLIDS (TONS PER AC-FT) .90 .91 .87	SOLVED SOLIDS (TONS PER DAY) 5620 5600 6530	NESS (CA, MG) (MG/L) 310 310 328 312	CAR- BONATE HARD- NESS (MG/L) 142 143 149	2.3 2.1	FIC COND- UCTANCE (MICRO- MHOS) 928 935 929 859	7.5 7.8 7.8 7.8
OCT. OB CB NGV. 13 DEC. 11 JAN. CB	(NO3) (MG/L) 2.7 2.1 2.1	PHATE (P04) (MG/L) (MG/L)	SOL VED BORON (B) (UG/L)  160 18D 140	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 665 669 641 586 732	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 651 604 614 558	SOLVED SOLIDS (TONS PER AC-FT) .90 .91 .87 .80	SOLVED SOLIDS (TONS PER DAY) 5620 5600 6530 5600	NESS (CA, MG) (MG/L) 310 310 328 312 360	CAR- 80MATE HARD- NESS (MG/L) 142 143 149 133	2.3 2.1 1.9	FIC COND- UCTANCE (MICRO- MHOS) 92B 935 929 859	(UNITS) 7.5 7.8 7.8 7.8 7.7
OCT.  08  C8  NGV.  13  DEC.  11  JAN.  C8  FEB.  G6  MAR.  C9  APR.	(NO3) (MG/L) 2.7 2.1 2.1 3.6 2.3 2.0	PHATE (PD4) (MG/L)	SOL VED BORON (B) (UG/L) 160 180 140 160 190	SOL VED SOL IDS (RESI- DUE AT 180 CJ (MG/L) 665 669 641 586 732 653	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 651 604 614 558 673 603	SOLVED SOLIDS (TONS PER AC-FT) .90 .91 .87 .80 1.00	SOLVED SOLIDS (TONS PER DAY) 5620 5600 6530 5600 5420 4580	NESS (CA+ MG) (MG/L) 310 328 312 360 316	CAR- BONAT- HARD- NESS (MG/L) 142 143 149 133 153	AO- SORP- TION RATIO 2-3 2-1 1-9 1-8 2-0 2-1	FIC COND- UCTANGE (MICRO- MHOS) 92B 935 929 859 990	(UNITS) 7.5 7.8 7.8 7.7 7.6 7.8
OCT.  OB  CB  NGV.  13  DEC.  11  JAN.  C6  FEB.  C6  APR.  C9  APR.	(NO3) (MG/L) 2.7 2.1 2.1 3.6 2.3 2.0	PHATE (PO4) (MG/L) (MG/L)	SOL VED BORON (B) (UG/L) 160 180 140 160	SOLVED SOLIDS (RESI- DUE AT 180 C; (MG/L) 665 669 641 586 732 653	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 651 604 614 558 673	SOLVED SOLIDS (TONS PER AC-FT) .90 .91 .87 .80 1.00 .89	SOLVED SOLIDS (TONS PER DAY) 5620 5600 6530 5600 5420 4580 5890	NESS (CA+MG) (MG/L) 310 328 312 360 316 335	CAR- BONATE HARD- NESS (MG/L) 142 143 149 133 153 137	AO- SORP- TION RATIO 2.3 2.1 1.9 1.8 2.0 2.1	FIC COND- UCTANCE (MICRO- MHOS) 92B 935 929 859 990 927	(UNITS)  7.5 7.8 7.8 7.7 7.6 7.8 8.0
OCT.  OB  CB  CB  NGV.  13  DEC.  11  JAN.  GB  FEB.  O6  C9  APR.  C9  MAY  13  JUNE	(NO3) (MG/L) 2.7 2.1 3.6 2.3 2.0 2.0	PHATE (POA) (MG/L) (MG/L)	SOL VED BORON (B) (UG/L) 160 180 140 160 190 120	SOL VED SOL IOS (RESI- DUE AT 180 CI) (MG/L) 665 669 641 586 732 653 642 617	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)  651 664 614 558 673 603 668	SOLVED SOLIOS (110NS PER AC-FT) .90 .91 .87 .80 1.00 .89 .87 .84	SOLVED SOLIOS (170NS PER DAY)  5620 5600  6530  5600  5420  4580  5890  5000	NESS (CA, MG) (MG/L) 310 310 328 312 360 316 335 317	CAR- BONATE HARD- NESS (MG/L) 142 143 149 133 153 157 110	2.3 2.1 1.9 1.8 2.0 2.1	FIC COND- UCTANCE (MICRO- MHOS) 928 935 929 859 990 927 936 927	(UNITS)  7.5 7.8 7.8 7.7 7.6 7.8 8.0
OCT. OB CB NGV. 13 DEC. 11 JAN. CG FEB. OC MAR. C9 APR. C9 APR. JUNE 16 JULY	(NO3) (MG/L) 2.7 2.1 3.6 2.3 2.0 2.0 5.3	PHATE (PC4) (MG/L)	SOL VED BORGN (B) (US/L)	SOL VED SOL IDS (RESIDUE AT 180 CI) (MG/L) 665 669 641 586 732 653 642 617 270	SOLVED SOLIDS (SUM OF CONSTILOR OF CO	SOLVED SOLIOS (TONS PER AC-FT)  .90 .91 .87 .80 1.00 .89 .87 .84	SOLVED SOLIDS (TONS PER DAY)  5620 5600 6530 5600 5420 4580 5890 5000 7950	NESS (CA, MG) (MG/L1)  310 310 328 312 360 316 335 317 197	CAR- BONATE HARD- NESS (MG/L) 142 143 149 133 153 153 110	2.3 2.1 1.9 1.8 2.0 2.1 2.2 2.2	FIC COND- UCTANCE (MICRO- MHOS) 928 935 929 859 990 927 936 927 441	7.5 7.8 7.8 7.7 7.6 7.8 8.0 8.3
OCT.  08  C8  NGV.  13  DEC.  11  JAN.  C8  FEB.  C9  APR.  C9  AUR.  13  JUNE  16	(NO3) (MG/L) 2.7 2.1 3.6 2.3 2.0 2.0	PHATE (PC4) (MG/L)	SOL VED BORON (B) (UG/L) 1 160 180 140 160 190 120 90 80 90	SOL VED SOL IOS (RESIDUE AT 180 C) (MG/L) 665 669 641 586 732 653 642 617 270 289 358	SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) 651 604 614 558 673 668 619 376 452 419	SQLVED SQLIOS (TONS PER AC-FT)  .90 .91 .87 .80 1.00 .89 .87 .84 .37 .39 .49	SOLVED SOLIOS (TONS PER DAY)  5620 5600 6530 5600 5420 4580 5000 7950 14300 8980	NESS (CA, MG) (MG/L1)  310  328  312  360  316  335  317  197  272  204	CAR- BONATE HARD- NESS (MG/L) 142 143 149 133 153 137 110 119 0	2.3 2.1 1.9 1.8 2.0 2.1 2.2 2.2 1.0	FIC COND- UCTANCE (MICRO- MHOS)  928 935  929 859  990 927  936  927  441  508	(UNITS) 7.5 7.8 7.8 7.6 7.6 8.0 8.3 8.0 8.0
OCT.  OB  CB  NOV.  13  DEC.  11  JAN.  CB  CB  APR.  C9  MAY  13  JUNE  16  JULE  OG  AGG.  GG	(NO3) (MG/L) 	PHATE (PC4) (MG/L)	SOL VED BORON (B) (UG/L)	SOL VED SOL IOS (RESI-DUE AT 180 C.) (MG/L) 665 669 641 586 642 617 270 289 358 568	SOLVED SOLLIDS (SUM OF CONSTI-TUENTS) (MG/L) 651 604 614 558 673 668 619 378 452 419 571	SQLVED SQLIOS (TONS PER AC-FT)  .90 .91 .87 .80 1.00 .89 .87 .84 .37 .39	SOLVED SOLIOS (TONS PER DAY)  5620 5600  6530  5600  5420  4580  5890  5000  7950  14300  8980  5090	NESS (CA, MG) (MG/L)  310  328  312  360  316  335  317  197  272  204	CAR- BONATE HARD- NESS (MG/L)  142 143  149 133 153 157 110 0 0 0	2.3 2.1 1.9 1.8 2.0 2.1 2.2 2.2 1.0 1.1	FIC COND- COND- UCTANCE (MICRO- MHOS) 928 935 929 859 990 927 936 927 441 508	(UNITS) 7.5 7.8 7.8 7.6 7.6 7.8 8.0 8.3 8.0 7.7 8.5
OCT.  OB  CS  NGV.  13  DEC.  11  JAN.  C6  FEB.  OC  APR.  C9  APR.  11  JUNE  16  16  JULY  O9  ALG.  G6  66  18	(NG) (NG/L) 2.7 2.1 2.1 3.6 2.3 2.0 2.0 5.3 10 2.4 1.0 1.0	PHATE (PD4) (MG/L) (MG/L) (PO4) (PD4) (PD4	SOLVED BORKIN (B) (UG/L)	SOL VED SOL IOS (RESI-DUE AT 180 C) (MG/L) 665 667 641 586 642 617 270 289 358 568 592	SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) 651 604 614 558 673 668 619 376 452 419 571	SQLVED SQLIOS (TONS PER AC-FT)  .90 .91 .87 .80 1.00 .89 .87 .84 .37 .39 .49 .77 .81	SOLVED SOLIOS (TONS PER DAY)  5620 5600 6530 5600 5420 4580 5890 5000 7950 14300 8980 5090 5440	NESS (CA+MG) (MG/L) 310 328 312 360 316 335 317 197 272 204 276 287	CAR- BONATE HARD- NESS (MG/L) 142 143 149 133 153 100 119 0 0	2.3 2.1 1.9 1.8 2.0 2.1 2.2 2.2 1.0	FIC COND- UCTANCE (MICRO- MHOS)  928 935  929 859  990 927  936  927  441  508	(UNITS) 7.5 7.8 7.8 7.6 7.6 8.0 8.3 8.0 8.0
OCT.  OB  CB  NOV.  13  DEC.  11  JAN.  CB  CP  APP  APP  APP  LILY  OPP  ALG.  LB  21	(NO3) (MG/L) 	PHATE (PO4) (MG/L) (PO4)	SOL VEO BORGN (B) (UG/L)	SOL VED SOL IOS (RESI-DUE AT 180 C.) (MG/L) 665 669 641 586 642 617 270 289 358 568 592 600	SOLVED SOLIDS (SUM OF CONSTITUTE OF CONSTITU	SQLVED SQLIOS (TOMS PER AC-FT)  .90 .91 .87 .80 1.00 .89 .87 .84 .37 .39 .49 .77 .81 .82	SOLVED SOL 10S (TONS PER DAY)  5620 5600 6530 5600 5420 4580 5000 7950 14300 8980 5090 5440 4990	NESS (CAMG) (MG/L1) 310 310 328 312 360 316 335 317 197 272 204 276 287 292	CAR- BONATE HARD- NESS (MG/L)  142 143  149 133 153 157 110 0 0 0	2.3 2.1 1.9 1.8 2.0 2.1 2.2 2.2 1.0	FIC COND- UCTANCE (MICRO- MHOS)  928 935  929 859  990  927  936  927  441  508  527  810  861	(UNITS) 7.5 7.8 7.8 7.7 7.6 7.8 8.0 8.3 8.0 7.7 8.5 7.5
OCT. OB CB CS NGV. 13 DEC. 11 JAN. CG FEB. OC MAY. 13 LOCAL 16 JULY O9 ALG. CG CG ALG. CG ALG. CG 24 24	(NG) (NG/L) 2.7 2.1 2.1 3.6 2.3 2.0 2.0 5.3 10 2.4 1.0 1.0	PHATE (PD4) (MG/L) (MG/L) (PO4) (PD4) (PD4	SOLVED BORKIN (B) (UG/L)	SOL VED SOL IOS (RESI-DUE AT 180 C) (MG/L) 665 667 641 586 642 617 270 289 358 568 592	SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L) 651 604 614 558 673 668 619 376 452 419 571	SQLVED SQLIOS (TONS PER AC-FT)  .90 .91 .87 .80 1.00 .89 .87 .84 .37 .39 .49 .77 .81	SOLVED SOLIOS (TONS PER DAY)  5620 5600 6530 5600 5420 4580 5890 5000 7950 14300 8980 5090 5440	NESS (CA,MG) (MG/L1) 310 310 328 312 360 316 335 317 197 272 204 276 287 292 342	CAR-BONATE HARD-NESS (MG/L)  142 143 149 133 153 137 110 119 0 0 0 63 121 119 179	2.3 2.1 1.9 1.8 2.0 2.1 2.2 2.2 1.0 1.1 1.4 2.1 2.2 2.0 2.1	FIC COND- COND- UCTANCE (MICRO- MHOS) 928 935 929 859 990 927 936 927 441 508 527 810 861 865 858	(UNITS)  7.5 7.8 7.8 7.6 7.6 8.0 8.0 8.0 7.7 8.5 7.5 7.6 7.7
OCT.  OB  CB  NOV.  13  DEC.  11  JAN.  CB  CP  APP  APP  APP  LILY  OPP  ALG.  LB  21	(NO3) (MG/L) 	PHATE (PO4) (MG/L) (PO4)	SOL VEO BORGN (B) (UG/L)	SOL VED SOL IOS (RESI-DUE AT 180 C.) (MG/L) 665 669 641 586 642 617 270 289 358 568 592 600	SOLVED SOLIDS (SUM OF CONSTITUTE OF CONSTITU	SQLVED SQLIOS (TOMS PER AC-FT)  .90 .91 .87 .80 1.00 .89 .87 .84 .37 .39 .49 .77 .81 .82	SOLVED SOL 10S (TONS PER DAY)  5620 5600 6530 5600 5420 4580 5000 7950 14300 8980 5090 5440 4990	NESS (CAMG) (MG/L1) 310 310 328 312 360 316 335 317 197 272 204 276 287 292	CAR-BONATE HARD-NESS (MG/L)  142 143 149 133 153 137 110 119 0 0 0 63 121	2.3 2.1 1.9 1.8 2.0 2.1 2.2 2.2 1.0 1.1 1.4	FIC COND- COND- COND- MHOS) 928 935 929 859 990 927 936 927 441 508 527 810 861 865	(UNITS) 7.5 7.8 7.8 7.6 7.8 8.0 8.3 8.0 7.7 8.5 7.5 7.5

# 0931 5000 GREEN RIVER AT GREEN RIVER, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	0, 20		00171102	· · · · · · · · · · · · · · · · · · ·		LY MEASUR		OCTODER 170	,, 10 3271	LINDEN 17	•	
DAY	OC T	NOV	DEC	JAN	FFB	MAR	APR	МΑΥ	JIJN	JUL	AUG	SFP
1		965	865	865	914				338		770	878
2		966	981		922				356	424	775	
3		939	881		904			660	338		789	
4		904	964		931		948	668	354		812	
5		954	864		963	905	965	665	353		814	1120
6	937	904	864			918	962	668	369	430	855	1100
7	974	901	893			923	962	656	369	508	860	1080
8	1.200	885	897			928	938		647	589	858	1050
9	1000	914	896		945	928	354			674	814	
10	1090	904	894	972	957	952	954			685	820	
11	943	757	897	969	960	963		497	638	695	818	
12	943	943	997	926	954	960		501	579	576	823	
13	987	942	896	899	881	918	940	471		607	827	
14	1000	914	845	974	880	916	890	465		613	990	
15	949	914	851	857	876	911	798	443	584	673		
16	922	915	866	837	878	903	791	450	478	592		
17	913	912		810	877	998	772	438	482	591	838	
18	974	937	845	908	904	926	879	433	493	579		
10	977	906	852	810	890	960	880	441	407	611		
20	1 390	921		872	R 93	960	895	449	423	610		
21	1 380	936		823	885	913	930	454	433	615		
22	1169	903		825	883	911	935	436	426	624		
23	1150	903		926	877	911	887		419	687		911
24	393	925		971	905	949	887		429	684		9)7
25	977	903		873	906	955	853	368	394			904
26	971	905		876	914	974	848	346	399		889	
27	961	906		881		971	916	378	361	765	881	
29	970	909		906		977	919	369	369	761	874	907
29	970	864		914		923	929	345	380	786	837	954
30	970	862		925		914	940	354	383	789	852	945
31	967			925		916		354		770	868	
AVG	991	916			909	933	902		431	634		
	•		PERATURE	(°C) OF WA	ITER, WATE		TOBER 1	.969 TO SEPT				

TEMPERATURE	(°C)	OF	WATER,	WATER	YEAR	OCTOBER	1969	TO	SEPTEMBER	1970
			( ONC	-DAIL	Y MEAS	SUREMENT	)			

DAY	OC T	404	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		19.0	3.0	0.0	0.0				17.0		23.0	20.0
2		10.0	2.0		0.0				17.0	21.0	23.0	
3		5.7	2.3		0.0			12.0	17.0		23.0	
4		6.0	2.3		0.0		8.5	12.0	18.0		22.0	
5		6.0	1.7		0.0	6.5	8.5	12.0	18.0		22.0	19.0
6	14.0	6.0	3.7			6.5	8.5	12.0	19.0	21.0	22.0	
7	14.0	6.0	2.0			7.0	8.5	11.5	18.0	21.0	22.0	19.0
9	17.0	8.0	1.9			7.0	8.0		18.0	22.0	22.0	19.0
9	10.0	8.0	0.0		0.5	7.0	12.5			22.0	21.0	
10	10.0	7.0	0.0	0.0	0.5	7.9	12.5			22.0	21.0	
11	10.0	7.0	0.0	0.0	0.5	7.0		13.5	17.0	22.0	21.0	
12	17.0	A • 9	0.0	0.0	0.5	7.5		13.0	18.0	22.0	21.0	
13	11.0	9.0	0.0	7.0	0.5	7.5	12.5	13.5		22.0	21.0	
14	10.0	6.0	0.5	0.0	0.5	7.5	12.5	13.5		22.0	21.0	
15	5.0	6.7	^.5	7.0	0.5	7.5	9.5	15.0	18.0	22.0		
16	5.3	7.0	0.0	0.5	0.0	7.5	9.5	15.0	18.0	22.0		
17	5.0	7.7		0.5	0.0	7.5	9.5	15.0	18.0	23.0	21.0	
18	5.0	5.0	0.0	7.5	0.5	7.0	9.5	15.0	18.0	23.0	21.0	
10	5.0	5.0	0.0	0.5	0.5	7.0	9.5	15.0	18.0	23.0		
23	5.0	6.9		0.0	0.5	7.0	9.5	16.0	18.0	23.0		
21	5.0	5.0		0.0	0.5	7.0	8.0	16.0	18.0	23.0	21.0	
22	5.0	5.0		0.0	0.5	6.5	8.0	16.0	18.0	23.0		
23	5.0	4.0		0.0	0.5	7.0	11.5		18.0	23.0		13.0
24	9.0	1.0		0.0	6.0	7.5	11.5		18.3	23.0	20.0	13.0
25	7.0	2.0		0.0	6.0	7.5	12.0	16.0	20.0			12.0
26	10.0	3.0		0.0	7.5	7.5	12.0	16.9	20.0		20.0	
27	10.0	3.0		0.5		7.5	11.5	17.0	21.0	23.0	23.0	
28	10.0	3.3		0.5		7.5	11.5	17.0	21.0	22.0	22.0	13.0
29	9.0	2.0		າ.o		7.0	11.5	17.0	21.0	22.0	20.0	13.0
30	10.0	1.7		0.0		7.0	11.5	17.0	21.0	22.0	20.0	13.0
31	8.3			0.0		7.0		17.0		23.0	20.0	
AVG	3.5	5.5			1.0	7.0	10.5		18.5	22.5		

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DECEMBER

# 0931 5000 GREEN RIVER AT GREEN RIVER, UTAH--Continued

# SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

OCTOBER

NOVEMBER

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4090	278	307D	4490	421	5100	3480	178	1670
2 3	4090 3880	282 285	3110 2990	4560 4890	426 275	5240	3430	134	1240
4	4240	289	3310	4400	258	3630 3070	3850 3770	132 130	1370 1320
5	3770	293	2980	3910	183	1930	3770	113	1150
6 7	3600 3290	297	2690	3710	214	2140	4090	119	1310
á	3080	166 240	1470 2000	3880 4180	238 184	2490 2080	4430 4530	236 244	2820 2980
9	2920	237	1870	4120	280	3110	4620	234	2920
10	3000	174	1410	4150	182	2040	4300	225	2610
11	3850	173	1800	4150	231	2590	3770	174	1770
12 13	3740 3770	187 206	1890 2100	4150 3740	221 218	2480 2200	3910 4820	187 188	1970 2450
14	3540	227	2170	3650	186	1830	4850	360	4710
15	4190	250	2820	3910	191	2020	4620	137	1710
16	4720	304	3870	4120	195	2170	4620	135	1680
17 18	4950 4620	303 307	4050 3830	4270	185	2130	4660	124	1560
19	4530	360	4400	4240 3910	159 133	1820 1400	4530 4460	114 108	1390 1300
20	5500	3630	53900	3540	159	1520	4850	116	1520
21	5160	1570	21900	3510	185	1750	4950	124	1660
22 23	4560 4090	820	10100	3910	106	1120	4920	133	1770
24	4300	550 531	6070 6160	4000 3940	103 126	1110 1340	4950 4890	143 153	1910 2020
25	4660	512	6440	3880	163	1710	4790	164	2120
26	4450	494	5940	3350	127	1150	4950	176	2350
27	4240	477	5460	3260	150	1320	4690	189	2390
28 29	4370 4490	460 444	5430 5380	3430	166	1540	4920	203	2700
30	4720	428	5450	3940 3970	330 324	3510 3470	4920 4000	217 233	2880 2520
31	4300	461	5350				3200	250	5160
TOTAL	126700		189610	119160		69010	136540		63930
		JANUARY			FEBRUARY			MARCH	
		MEAN			MEAN			MEAN	
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/OAY)	MEAN OISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SECIMENT DISCHARGE (TDNS/DAY)
	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/OAY)	OISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TDNS/DAY)
1 2	DISCHARGE (CFS) 2400 2430	TRATION (MG/L) 253 245	DISCHARGE (TONS/DAY) 1640 1610	DISCHARGE (CFS) 2900 2480	TRATION	DISCHARGE (TONS/OAY) 1800 1330	DISCHARGE	TRATION (MG/L) 396 440	DISCHARGE
1 2 3	DISCHARGE (CFS) 2400 2430 2360	TRATION (MG/L) 253 245 238	01SCHARGE (TONS/DAY) 1640 1610 1520	DISCHARGE (CFS) 2900 2480 2500	TRATION (MG/L) 230 199 172	DISCHARGE (TONS/OAY) 1800 1330 1160	01 SCHARGE (CFS) 3970 41 20 3940	TRATION (MG/L) 396 440 490	DISCHARGE (TDNS/DAY) 4240 4890 5210
1 2	DISCHARGE (CFS) 2400 2430	TRATION (MG/L) 253 245	DISCHARGE (TONS/DAY) 1640 1610	DISCHARGE (CFS) 2900 2480	TRATION (MG/L) 230 199	DISCHARGE (TONS/OAY) 1800 1330	01 SCHARGE (CFS) 3970 4120	TRATION (MG/L) 396 440	DISCHARGE (TDNS/DAY) 4240 4890
1 2 3 4 5	240C 2430 2360 2180 2300	TRATION (MG/L) 253 245 238 231 224	01SCHARGE (TONS/DAY) 1640 1610 1520 1360 1390	DISCHARGE (CFS) 2900 2480 2500 2720 2430	TRATION (MG/L) 230 199 172 149 149	DISCHARGE (TONS/OAY) 1800 1330 1160 1090 978	01SCHARGE (CFS) 3970 4120 3940 3910 3710	TRATION (MG/L) 396 440 490 545 606	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070
1 2 3 4 5	2400 2430 2360 2180 2300 2400 2240	TRATION (MG/L) 253 245 238 231 224 217 210	OISCHARGE (TONS/DAY) 1640 1610 1520 1360 1390 1410 1270	DISCHARGE (CFS) 2900 2480 2500 2720 2430 2360 2520	TRATION (MG/L) 230 199 172 149 149 120 122	DISCHARGE (TONS/OAY) 1800 1330 1160 1090 978 765 830	01 SCHARGE (CFS) 3970 4126 3940 3910 3710 3430 3400	TRATION (MG/L) 396 440 490 545 606 674 937	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600
1 2 3 4 5 6 7 8	2400 2360 2180 2300 2400 2240 2240 2240 2640	TRATION (MG/L) 253 245 238 231 224 217 210 204	01SCHARGE (TONS/DAY) 1640 1610 1520 1360 1390 1410 1270 1450	DISCHARGE (CFS) 2900 2480 2500 2720 2430 2360 2523 2480	TRATION (MG/L) 230 199 172 149 149 120 122 123	DISCHARGE (TDNS/OAY) 1800 1330 1160 1090 978 765 830 824	01 SCHARGE (CFS) 3970 4120 3940 3910 3710 3430 3400 3240	TRATION (MG/L) 396 440 490 545 606 674 937 979	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600 8560
1 2 3 4 5	2400 2430 2360 2180 2300 2400 2240	TRATION (MG/L) 253 245 238 231 224 217 210	OISCHARGE (TONS/DAY) 1640 1610 1520 1360 1390 1410 1270	DISCHARGE (CFS) 2900 2480 2500 2720 2430 2360 2520	TRATION (MG/L) 230 199 172 149 149 120 122	DISCHARGE (TONS/OAY) 1800 1330 1160 1090 978 765 830	01 SCHARGE (CFS) 3970 4126 3940 3910 3710 3430 3400	TRATION (MG/L) 396 440 490 545 606 674 937	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 240C 2430 2360 2180 2300 2400 2240 2640 2720 2720	TRATION (MG/L) 253 245 238 231 224 217 210 204 165 133	01SCHARGE (TONS/OAY) 1640 1610 1520 1360 1390 1410 1270 1450 1210	DISCHARGE (CFS) 2900 2480 2500 2770 2430 2360 2520 2480 2450 2450 2520	TRATION (MG/L)  230 199 172 149 120 122 123 125 104	DISCHARGE (TONS/OAY) 1800 1330 1150 1090 978 765 830 824 827 708	OI SCHARGE (CFS)  3970 4120 3940 3910 3710 3430 3400 3240 3320 2920	TRATION (MG/L)  396 440 490 545 606 674 937 979 634 366	DISCHARGE (TDNS/DAY) 4240 4890 5210 6070 6240 8660 8560 5680 2890
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 2400 2400 2360 2180 2300 2400 2240 2240 2720 2720 2720 2720	TRATION (MG/L) 253 245 238 231 224 217 210 204 165 133 133	OISCHARGE (TONS/OAY)  1640 1610 1520 1360 1390  1410 1270 1450 1210 977	DISCHARGE (CFS) 2900 2480 2500 2720 2430 2360 2520 2460 2520 2640 28800	TRATION (MG/L)  230 199 172 149 149 120 122 123 125 104	DISCHARGE (TONS/OAY) 1800 1330 1160 1090 978 765 830 824 827 708 870	01 SCHARGE (CFS) 3970 4126 3940 3910 3710 3430 3240 3220 2920 3050 2970	TRATION (MG/L) 396 440 490 545 606 674 937 979 634 366 371 323	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 240C 2410 2360 2180 2300 2400 2240 2640 2720 2720 337C 3680 4010	TRATION (MG/L) 253 245 238 231 224 217 210 204 165 133 133 133 243	01SCHARGE (TONS/OAY)  1640 1610 1520 1360 1390  1410 1270 1450 1210 977 1210 1320 2660	DISCHARGE (CFS) 2900 2480 2500 2720 2430 2360 2520 2480 2450 2520 2640 2800 2840	TRATION (MG/L)  230 199 172 149 149 120 122 123 125 104	DISCHARGE (TONS/OAY) 1800 1330 1160 1090 978 765 830 824 827 708 870 1170	01 SCHARGE (CFS) 3970 41.26 3940 3910 3710 34.30 34.00 3240 3320 2920 3050 2970 2870	TRATION (MG/L)  396 440 490 545 606 674 937 979 634 366 371 323 281	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8560 5850 5860 2890 3060 2590 2180
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 2400 2400 2360 2180 2300 2400 2240 2240 2720 2720 2720 2720	TRATION (MG/L) 253 245 238 231 224 217 210 204 165 133 133	OISCHARGE (TONS/OAY)  1640 1610 1520 1360 1390  1410 1270 1450 1210 977	DISCHARGE (CFS) 2900 2480 2500 2720 2430 2360 2520 2460 2520 2640 28800	TRATION (MG/L)  230 199 172 149 149 120 122 123 125 104	DISCHARGE (TONS/OAY) 1800 1330 1160 1090 978 765 830 824 827 708 870	01 SCHARGE (CFS) 3970 4126 3940 3910 3710 3430 3240 3220 2920 3050 2970	TRATION (MG/L) 396 440 490 545 606 674 937 979 634 366 371 323	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (GFS) 2400 2440 2360 2180 2300 2400 2240 2240 2720 3370 3680 4030 4330 3777	TRATION (MG/L) 253 245 231 224 217 210 204 165 133 133 243 248 132	01SCHARGE (TONS/OAY) 1640 1610 1520 1340 1370 1410 1270 1450 1210 977 1210 1320 2640 2900 1340	01 SCHARGE (CFS) 2480 2500 2720 2430 2360 2520 2480 2450 2520 2640 2800 2840 3350 3820	TRATION (MG/L)  230 199 172 149 149 120 122 123 125 104 122 155 151 349 522 744	DISCHARGE (TONS/OAY) 1800 1330 1160 1090 978 765 830 824 827 708 870 1170 1160 3160 5380	01 SCHARGE (CFS) 3970 41 26 3940 3910 3710 3430 3400 3220 2920 3050 2970 2870 3320 3320 3460	TRATION (MG/L)  396 440 490 545 606 674 937 979 634 366 371 323 281 286 286 281 286 292	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2590 2180 2560 2620 3750
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 240C 2430 2360 2180 2300 2400 2240 2240 2720 337C 337C 34303 3777 3770 4300	TRATION (MG/L)  253 245 247 211 224 217 210 204 165 133 133 243 248 132 158 203	01SCHARGE (TONS/OAY) 1640 1610 1520 1360 1390 1410 1270 1450 1270 1210 1320 2640 2900 1340 1610 2360	01 SCHARGE (CCFS) 2900 2480 2500 2720 2430 2360 2720 2460 2520 2640 2800 2840 3820 4000 3940	TRATION (MG/L)  230 199 172 149 149 120 122 123 105 104 122 744 452	DISCHARGE (TONS/OAY)  1800 1330 1160 1978  765 830 824 827 708 870 1170 1160 3160 5380 8040 4810	01 SCHARGE (CFS) 3970 41 20 3940 3910 3710 34 30 3200 3220 3050 2970 2870 3320 3320 3460 3210	TRATION (MG/L)  396 440 490 545 606 674 937 979 634 366 371 323 281 286 292 401 221	DISCHARGE (TDNs/DAY) 4240 4890 5210 5750 6070 6240 86600 8560 5680 2890 3060 2590 2180 2560 2620 3750
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (GFS) 2400 2440 2360 2180 2300 24400 2240 2640 2720 3370 3680 4030 4330 3777 3770 4300 4240	TRATION (MG/L)  253 245 238 231 224  217 210 204 165 133 133 248 248 248 258 203 212	01SCHARGE (TONS/OAY) 1640 1640 1520 1340 1370 1410 1270 1450 1210 977 1210 1320 2640 2900 1340 1610 2360 2430	01 SCHARGE (CFS) 2900 2480 2500 2720 2430 2360 2520 2480 2450 2520 2640 2800 2840 3350 3820 4000 3940	TRATION (MG/LI)  230 199 179 149 149 120 122 123 125 104 125 151 349 522 744 452 346	DISCHARGE (TONS/OAY) 1800 1330 1160 1090 978 765 830 824 827 708 870 1170 1160 3160 5380 8040 4810 3650	01 SCHARGE (CFS) 3970 41 26 3940 3910 3710 3430 3400 3240 3320 2920 3050 2970 2870 3320 3320 3460 3210 2800	TRATION (MG/L)  396 440 490 545 606 674 937 979 634 366 371 223 281 286 282 401 221 239	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2590 2180 2560 2620 3750 1920 1810
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 240C 2430 2360 2180 2300 2400 2240 2240 2720 337C 337C 34303 3777 3770 4300	TRATION (MG/L)  253 245 247 211 224 217 210 204 165 133 133 243 248 132 158 203	01SCHARGE (TONS/OAY) 1640 1610 1520 1360 1390 1410 1270 1450 1270 1210 1320 2640 2900 1340 1610 2360	01 SCHARGE (CCFS) 2900 2480 2500 2720 2430 2360 2720 2460 2520 2640 2800 2840 3820 4000 3940	TRATION (MG/L)  230 199 172 149 149 120 122 123 105 104 122 744 452	DISCHARGE (TONS/OAY)  1800 1330 1160 1978  765 830 824 827 708 870 1170 1160 3160 5380 8040 4810	01 SCHARGE (CFS) 3970 41 20 3940 3910 3710 34 30 3200 3220 3050 2970 2870 3320 3320 3460 3210	TRATION (MG/L)  396 440 490 545 606 674 937 979 634 366 371 323 281 286 292 401 221	DISCHARGE (TDNs/DAY) 4240 4890 5210 5750 6070 6240 86600 8560 5680 2890 3060 2590 2180 2560 2620 3750
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DISCHARGE (CFS) 2400 2440 2360 2180 2300 2400 2240 2640 2720 3370 3680 4030 4330 3777 3777 4300 4240 4000 3710	TRATION (MG/L)  253 245 238 231 224 217 210 204 165 133 133 133 243 246 132 158 203 212 220 220	01SCHARGE (TONS/OAY) 1640 1640 1520 1340 1370 1410 1270 1450 1210 977 1210 1320 2640 2900 1340 1610 2380 2380 2380 2200	01 SCHARGE (CFS) 2900 2480 2500 2720 2430 2360 2520 2480 2450 2520 2640 2800 2840 3350 3820 4000 3940 3910 3540 3290	TRATION (MG/L) 230 199 172 149 149 149 120 122 123 125 104 122 155 151 349 522 744 452 346 346 346	DISCHARGE (TONS/OAY)  1800 1330 1160 1978  765 830 824 827 708 870 1170 1160 3160 5380 8040 4810 3650 3310	01 SCHARGE (CFS) 3970 4120 3940 3910 3710 3430 3240 3220 3050 2970 2870 3320 3320 3460 3210 2800 2720	TRATION (MG/L) 396 440 490 545 606 674 937 634 366 371 323 281 286 292 401 221 239 327 402 203	DISCHARGE (TDNs/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2890 3060 2590 2180 2560 2620 3750 1920 1810 2400 2930
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DISCHARGE (CFS)  240C 2430 2360 2180 2300  2400 2240 2240 2720 337C 337C 337C 34300 4330 33777  3770 4770 3710 3510 2950	TRATION (MG/L) 253 245 238 231 224 217 210 204 165 33 133 133 133 248 132 120 220 220 220 220 267	01SCHARGE (TONS/OAY) 1640 1610 1520 1360 1390 1410 1270 1270 1210 1270 1210 1210 1220 2640 2900 1340 1610 2360 2430 2380 2200 2080 2130	01 SCHARGE (CCFS) 2900 2480 2500 2720 2430 2360 2520 2480 2450 2520 2640 2800 2840 3350 33620	TRATION (MG/L) 230 199 172 149 149 120 122 123 125 104 122 155 134 346 346 346 255 244	DISCHARGE (TONS/OAY)  1800 1330 1160 1990 978 765 830 824 827 708 870 1170 1170 1170 1160 3160 5380 8040 4810 3650 3310 3070 2480	01 SCHARGE (CFS) 3970 41 20 3940 3910 3710 3430 3440 3220 3050 22920 3050 22970 22970 23320 3320 3460 3210 2800 2720 2700 3000 3100	TRATION (MG/L) 396 440 490 545 606 674 937 634 366 371 323 3281 281 281 282 401 221 239 327 402	DISCHARGE (TDNs/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2590 2180 2560 2620 3750 1920 1810 2400 2930 1640 1730
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DISCHARGE (CFS) 2400 24400 2360 2180 2300 24400 2240 2640 2720 3370 3680 4030 4330 3777 3777 4300 4240 4000 3710 3510 2950 2840	TRATION (MG/L)  253 245 238 231 224 217 210 204 165 133 133 133 243 248 132 158 203 212 220 220 267 171	01SCHARGE (TONS/OAY) 1640 1610 1520 1340 1390 1410 1270 1450 1210 977 1210 1320 2640 2900 1340 1610 2360 2430 2380 2200 2080 2130	01 SCHARGE (CFS) 2900 2480 2500 2720 2430 2360 2520 2480 2450 2520 2640 2800 2840 3350 3820 4000 3940 3910 3540 3290 3650 3650	TRATION (MG/L) 230 199 172 149 149 149 120 122 123 125 104 122 155 151 349 522 744 452 346 346 346 346 346 352	DISCHARGE (TONS/OAY)  1800 1330 1160 1090 978 765 830 824 827 708 870 1170 1160 3160 5380 8040 4810 3650 3310 3070 2480 2380 2250	01 SCHARGE (CFS) 3970 41.26 3940 3910 3710 3430 3400 3240 3320 2920 3050 2970 2870 3320 3320 3210 2800 2720 3000 3100 3100	TRATION (MG/L) 396 440 490 545 606 674 937 634 366 371 323 281 286 292 401 221 239 327 402 203 207 199	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2590 2180 2560 2620 3750 1920 1810 2400 2930
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS)  240C 2430 2360 2180 2300  2400 2240 2240 2720 337C 337C 337C 34300 4330 33777  3770 4770 3710 3510 2950	TRATION (MG/L) 253 245 238 231 224 217 210 204 165 33 133 133 133 248 132 120 220 220 220 220 267	01SCHARGE (TONS/OAY) 1640 1610 1520 1360 1390 1410 1270 1270 1210 1270 1210 1210 1220 2640 2900 1340 1610 2360 2430 2380 2200 2080 2130	01 SCHARGE (CCFS) 2900 2480 2500 2720 2430 2360 2520 2480 2450 2520 2640 2800 2840 3350 33620	TRATION (MG/L) 230 199 172 149 149 120 122 123 125 104 122 155 134 346 346 346 255 244	DISCHARGE (TONS/OAY)  1800 1330 1160 1990 978 765 830 824 827 708 870 1170 1170 1170 1160 3160 5380 8040 4810 3650 3310 3070 2480	01 SCHARGE (CFS) 3970 41 20 3940 3910 3710 3430 3440 3220 3050 22920 3050 22970 22970 23320 3320 3460 3210 2800 2720 2700 3000 3100	TRATION (MG/L) 396 440 490 545 606 674 937 634 366 371 323 3281 281 281 282 401 221 239 327 402	DISCHARGE (TDNs/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2590 2180 2560 2620 3750 1920 1810 2400 2930 1640 1730
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	DISCHARGE (CFS)  2400 2440 2360 2180 2300  2400 2240 2640 2720  3370 3680 4030 4330 3777  3770 4300 4240 4000 3710  3510 2950 2840 2920	TRATION (MG/L)  253 245 238 231 224 217 210 204 165 133 133 133 243 246 132 250 220 267 71 145 175 173 181	01SCHARGE (TONS/OAY) 1640 1610 1520 1340 1370 1410 1270 1450 1210 977 1210 1320 2640 2900 1340 2360 2430 2380 2200 2080 2130 2130 1140 1440	01 SCHARGE (CFS) 2480 2500 2720 2430 2360 2520 2480 2450 2520 2640 2800 2840 3350 3820 4000 3940 3910 3540 2290 3650 3650 3680 3370	TRATION (MG/L) 230 199 172 149 149 149 120 122 123 125 104 122 155 151 349 522 744 452 346 346 346 346 346 346 325 224 207 203	DISCHARGE (TONS/OAY)  1800 1330 1160 1090 978 765 830 824 827 708 870 1170 1160 3160 5380 8040 4810 3650 3310 3070 2480 2380 2250 1940 1850	01 SCHARGE (CFS) 3970 41 26 3940 3910 3710 3430 3400 3220 3050 2970 2870 3320 3320 3320 3320 3320 3320 3460 3210 2800 2720 3000 3100 3000 2640 2840	TRATION (MG/L) 396 440 490 545 606 674 937 779 634 366 371 323 281 286 292 401 221 239 327 402 203 207 199 156 159	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2590 2180 2560 2620 3750 1920 1810 2400 2930 1640 1730 1610 1110 1220
1 2 3 4 5 5 6 7 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS)  2400 2440 2360 2180 2300  2400 2240 2240 2720 3370 3370 33777 3777 3777 3777 37	TRATION (MG/L) 253 245 238 231 224 217 210 204 165 133 133 133 133 243 243 222 220 220 27 175 175 175 181 117	DISCHARGE (TONS/OAY) 1640 1610 1520 1360 1390 1410 1270 1450 1210 977 1210 1320 2640 2900 1340 1610 2380 2380 2200 2080 2130 1310 1140 1440 1430 891	01 SCHARGE (CCF) 2900 2480 2500 2720 2430 2360 2520 2640 2650 2720 2640 2800 2840 3910 3910 3940 3910 3920 3650 3650	TRATION (MG/L) 230 199 172 149 149 120 122 123 125 104 122 155 151 349 522 744 452 244 452 244 228 207 207 203 228	DISCHARGE (TONS/OAY)  1800 1330 1160 1090 978 765 830 824 827 708 870 1170 1160 3160 3650 3310 3070 2480 2290 1940	01 SCHARGE (CFF) 3970 41.20 3940 3910 3710 34.30 34.00 3240 3320 2920 3050 2970 2870 3320 3210 2800 2720 2700 3000 3100 3100 3000 2640 2840 2870 27740	TRATION (MG/L) 396 440 490 545 606 674 937 634 366 371 323 281 2281 229 401 221 239 327 402 203 707 156 159	DISCHARGE (TDNs/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2590 2180 2560 2590 1920 1920 1910 2400 2930 1640 1730 1610 1110 1220 3430 3030
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	DISCHARGE (CFS)  2400 2440 2360 2180 2300  2400 2240 2240 2720 3370 3680 4030 3777  3777 3777 3777 3777 3777 37	TRATION (MG/L) 253 245 238 231 224 217 210 204 165 133 133 133 133 133 132 243 248 200 267 171 145 173 181 171 116 108	01SCHARGE (TONS/OAY) 1640 1610 1520 1340 1370 1410 1270 1450 1210 977 1210 1320 2640 2900 1340 2430 2380 2200 2080 2130 2130 1140 1440 1430 891	01 SCHARGE (CFS) 2480 2500 2720 2430 2360 2520 2480 2450 2520 2640 2800 2840 3350 3820 4000 3940 3910 3540 2290 3650 3650 3680 3370	TRATION (MG/L) 230 199 172 149 149 149 120 122 123 125 104 122 155 151 349 522 744 452 346 346 346 346 346 346 325 224 207 203	DISCHARGE (TONS/OAY)  1800 1330 1160 1090 978 765 830 824 827 708 870 1170 1160 3160 5380 8040 4810 3650 3310 3070 2480 2380 2250 1940 1850	01 SCHARGE (CFS) 3970 4126 3940 3910 3710 3430 3400 32240 3320 2920 3050 2970 2870 3320 3320 3320 3320 3460 3210 2800 2720 3000 3100 3000 2640 2840 2570 2740 2570	TRATION (MG/L) 396 440 490 545 606 674 937 779 634 366 371 323 281 286 292 401 221 239 327 402 203 207 179 156 159 410 381	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2590 2180 2560 2620 3750 1920 1810 2400 2930 1640 1730 1610 1110 1220 3430 3030 2640
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	DISCHARGE (CFS)  240C 2430 2360 2180 2300  2400 2240 2640 2720 337C 337C 34300 4240 4330 3777 3770 3710 3710 3510 2950 2820 2820 2820 2820 2820 2850	TRATION (MG/L) 253 245 238 231 224 217 210 204 165 133 248 132 250 220 220 220 220 220 220 220 220 22	01SCHARGE (TONS/OAY) 1640 1640 1520 1340 1390 1410 1270 1450 1210 977 1210 1320 2640 2900 1340 2360 2380 2200 2080 2130 11140 1430 891 846 816	01 SCHARGE (CFS) 02 480 2 500 2 772 2 430 2 360 2 520 2 480 2 450 2 520 2 640 2 800 2 840 3 350 3 820 4 000 3 940 3 910 3 540 2 2 90 3 650 3 480 3 377 3 400 3 650 3 480 3 377 3 400 3 650 4 600	TRATION (MG/L) 230 199 172 149 149 149 120 122 123 125 104 122 155 151 349 522 744 452 346 346 346 346 346 346 346 346 346 346	DISCHARGE (TONS/OAY)  1800 1330 1160 1090 978 765 830 824 827 708 870 1170 1160 3160 5380 8040 4810 3650 3310 3070 2480 2380 2250 1940 1850 2090 2800 3700	01 SCHARGE (CFS) 3970 41.26 3940 3910 3710 34.30 34.00 3224 3320 2920 3050 2970 2870 3320 3320 3320 3320 3320 3320 3320 3460 3210 2800 2720 3000 3100 3000 2640 2840 2570 2740 2770 2740 2770	TRATION (MG/L) 396 440 490 545 606 674 937 779 634 366 371 323 281 286 292 401 221 239 327 402 203 207 199 156 159 410 381 434 424	DISCHARGE (TDNS/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2590 2180 2560 2620 3750 1920 1810 2400 2930 1640 1730 1610 1110 1220 3430 3030 2640 3210 3090
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	DISCHARGE (CFS)  2400 2440 2360 2180 2300  2400 2240 2240 2720 3370 3680 4030 3777  3777 3777 3777 3777 3777 37	TRATION (MG/L) 253 245 238 231 224 217 210 204 165 133 133 133 133 133 132 243 248 200 267 171 145 173 181 171 116 108	DISCHARGE (FONS/OAY)  1640 1610 1520 1360 1390  1410 1270 1450 1210 977  1210 1320 2660 2900 1340 1610 2350 2430 2430 2430 2430 2430 2430 2430 243	01 SCHARGE (CCF) 2900 2480 2500 2720 2430 2360 2520 2640 2650 2650 2640 2600 2640 3910 3910 3940 3910 3940 3910 3940 3910 3940 3970 3650 3650 4600 3650 4600	TRATION (MG/L)  230 199 172 149 149 120 122 123 125 104 122 155 151 349 522 744 452 244 452 254 207 203 228 346	DISCHARGE (TONS/OAY)  1800 1330 1160 1090 978 765 830 824 827 708 870 1170 1160 3160 3590 8040 4810 3650 331D 3070 2480 2250 1940 1850 2000 2700 2700 2700 2700 2700 2700 27	01 SCHARGE (CFF) 3970 41.20 3940 3910 3710 34.30 34.00 3240 3320 2920 3050 2970 2870 3320 3200 2700 3000 3100 3100 3000 2640 2840 2570 2740 2570 2740	TRATION (MG/L) 396 440 490 545 606 674 937 634 366 371 323 281 281 282 292 401 221 239 307 109 156 159 491 381 434	DISCHARGE (TDNs/DAY) 4240 4890 5210 5750 6070 6240 8600 8560 5680 2890 3060 2590 2180 2580 2590 1920 1920 1910 2400 2930 1640 1730 1610 1110 1120 3430 3030 2640 3210

# 0931 50 00 GREEN RIVER AT GREEN RIVER, UTAH--Continued

# SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR DCTOBER 1969 TO SEPTEMBER 1970

		APRIL			MAY			JUNE	
	MEAN	MEAN	CERTHENE		MEAN	CENTMENT	MFAN	MEAN CONCEN-	SEDIMENT
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2	3080 3100	420 464	3490 3880	4660 9070	1900 4700	23900 115000	21200 19700	1120 1020	64100 54300
3	2720	514	3770	8940	2400	57900	18700	981	49500
4	3000	568	4600	7360	2000	39700	17600	1090	51800
5	2770	314	2350	5900	1490	23700	15400	981	40800
6	3130	734	6200	4820	1470	19100	14400	1160	45100
7 8	3030 3400	369 283	3020 2600	4530 5930	1490 4100	18200 656 <b>00</b>	14800 15300	1220 5180	48800 214000
9	2970	432	3460	10400	5300	149000	16400	4440	197000
10	3000	600	4860	12900	7700	268000	17400	3800	179000
11	4300	2600	30200	14200	3200	123000	21000	3250	184000
12 13	5360 5900	4200	60800	13000	2540 2990	89200 88000	23200 22900	2090 2640	131000 163000
14	5900	5400 3800	86000 60500	10900 105 <b>0</b> 0	1490	42200	22300	3330	200000
15	5680	3100	47500	11700	2300	72700	22200	4210	252000
16	5970	3100	50000	14200	2640	101000	19000	5240	269000
17	6160	2420	40200	15000	2230	90300	16200	1880	82200
18	5680	1500	23000	14200	1470	56400	15600	1880 888	79200 36200
19 20	5230 4690	907 909	12800 11500	13000 14100	1670 1650	58600 62800	15100 14600	959	37800
21	4590	612	7580			96300	14800	710	28400
21 22	4370	605	7140	18100 20400	1970 1940	107000	15300	710	29300
23	4120	555	6170	21500	1890	110000	15500	710	29700
24	4460	465	5600	21600	1830	107000	15500	710	29700
25	4490	389	4720	21800	1780	105000	15900	710	30500
26	4330	378	4420	22000	1670	99200	15800	710	30300
27	3540	458	4380	21200	1610 1560	92200 87600	15100 14600	710 710	28 <b>9</b> 00 28000
28 29	3570 3460	464 792	4470 74 <b>0</b> 0	20800 21200	1320	75600	14200	71D	27200
30	3290	805	7150	21400	1310	75700	14000	710	26800
31				21600	1330	77600			
TOTAL	12529C		519760	436910		2597500	513700		2667600
		JULY			AUGUST			SEPTEMBER	
		MEAN			MEAN			MEAN	
	MEAN DISCHARGE	CONCEN- TRATION	SEDIMENT	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN-	SEDIMENT
DAY	(CFS)	(MG/L)	OISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TDNS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	OISCHARGE (TONS/DAY)
,	13200	1000	35600	3800	1060	10900	3620	1420	13900
ž	12300	2260	75100	3960	1060	11300	3130	1500	12700
3	11800	2180	6950 <b>0</b>	3700	434	4340	2670	1200	8650
4 5	11100 10100	2100 2020	62900 55100	3720	545	5470	2430	1200	7870
				3350	555	5020	2860	3470	26800
6 7	9600 9100	1950 847	50500 20800	3240	531	4650	3510	6006	56900
8	8600	869	20200	3090 3190	791 743	6600 6400	3370 3140	1300 707	11800 5990
9	8200	1420	31400	3250	329	2890	3090	1070	8930
10	7700	1340	27900	3480	327	3070	2910	854	6710
11	7300	1330	26200	3470	1420	13300	2740	681	5040
12 13	7000 6700	1120 1190	21200 21500	3430	4420	40900	2710	543	3970
14	6500	1180	20700	3610 3640	1410 1230	13700 12100	3260 3000	433 346	3810 2800
15	6200	1230	27600	3610	934	9100	3330	276	2480
16	5900	1220	19400	3330	710	6380	3670	220	2180
17 18	5600	355	5370	3420	539	4980	3400	176	1620
18	5300 5200	356 273	5090 3830	3400 3480	498 436	4570 4100	2800 3050	140	1060
20	5100	234	3220	3160	382	3260	3050 2920	140 139	1150 1100
21	5000	238	3210	3700	335	3350	3040	120	****
22	4800	211	2730	3360	336	3050	2880	139 138	1140 1070
23 24	4650 4500	252	3160	3390	338	3090	2810	138	1050
25	4400	260 321	3160 3810	3500 3620	339 42 <b>9</b>	3200 4190	2780 2510	142 134	1070 908
26	4300	396	4600	3320	543	4870	2670		
27	4400	489	5810	3320 3000	543 889	4870 7200	2670 2680	136 139	980 1010
28	4600	860	10700	2950	222	1770	3120	141	1190
29	4880	510	6720	3310	143	1280	3220	69	600
30 31	4060 3800	501 1940	5490 10700	3660 3740	141 1420	1390 14300	3110	70 	588
*OTA-			/F/200						
	211890		656200	106880		220720	90430		195066
TOTAL	DISCHARGE FO SUSPENDED-SE	R YEAR (CF DIMENT DIS	S-DAYS) CHARGE FOR YEA	AR (TONS)					2151730 7403558

# 0931 50 00 GREEN RIVER AT GREEN RIVER, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, MATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM MITHORAMAL TUBE; C, CHEMICALLY DISPERSED; N, 1Y LURITLY MATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; B, IN DISTILLED MATER)

			WATER			PARTICLE SIZE												
			TEM- PERA- TURE	U. I. C. C. U. A. C. C.	CONCEN-	SUSPENDED SEDIMENT DISCHARGE	PERC	ENT F	INER	THAN	THE	SIZE (	IN MI	LLIFE	T=RS)	INT	CATFO	METHCU OF ANALY-
	DATE	TIME	( C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	.008	.016	.03	1 .062	.125	. 253	• 50 ^	1.00	2	
00.7	8, 1969	133C	10.0	3080	236	1966					_							
NOV	13	1115	7.0	3800	248	2549	31	42			-	- 75	79	92	100			VPWC
DEC	11	1615	0.0	3540	154	1470					_							
JAN	A, 1970	133C	0.0	2740	204	1510					_							
FEB	6	1445	3.C	2520	120	816					-							
MAR	9	1300	8.5	3400	634	582C	55	70		95	_	- 98	99	100				Ab MC
APR	9	1135	10.5	2970	235	1880					_							
MAY	13	1245	13.0	10900	3730	110000	25	29			_	- 76	96	100				VPWC
JUN	12	1725	18.0	22300	2090	126000	45	57			_	- 100						SPMC
JUN	16	1320	14.0	18500	6329	31600C	36	43			-	- 71	91	100				VPkC
JUL	9	1145	21.0	9200	1496	37000	10	17			_	- 62	78	95	100			VPKC
AUG	6	1145	24.3	3320	306	2740	52	72			-	- 98	99	100				VP+C
SEP	9	1045	17.0	3130	1070	9040	47	66			_	- 98	49	110				VP // C

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## 09328500 SAN RAFAEL RIVER NEAR GREEN RIVER, UTAH

LOCATION.—Lat 38°52'20", long 110°22'20", in NE{SW} sec.27, T.22 S., R.14 E., Emery County, at gaging station at bridge on State Highway 24, 15 miles southwest of Green River and 35 miles upstream from mouth.

DRAINAGE AREA. -- 1,670 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: November 1946 to September 1949, November 1950 to September 1969 (daily), October 1969 to September 1970.
Water temperatures: July to September 1949, October 1950 to September 1962, October 1964 to September 1970.
Sediment records: March 1948 to September 1949, October 1950 to September 1959.

#### EXTREMES, -- 1969-70:

Specific conductance: Maximum daily, 4,650 micromhos Apr. 23; minimum daily, 908 micromhos June 6. Water temperatures: Maximum, 28.0°C July 17, 18, Aug. 7; minimum, freezing point on many days during November to February.

#### Period of record:

Dissolved solids (1948-49, 1950-69): Maximum, 6,430 mg/l May 22-25, 1967; minimum, 487 mg/l June 21-30, 1957. Hardness (1948-49, 1950-69): Maximum, 2,280 mg/l July 11, 13-18, 1954; minimum, 298 mg/l June 21-30, 1957. Specific conductance: Maximum daily, 7,230 micrombos July 15, 1954; minimum daily, 689 micrombos June 29, 1957.

Maximum (1949, 1950-61, 1965-70), 35.0°C July 11, 1954; minimum (1949, 1950-61, 1964-70), freezing point on many days during winter periods.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SDDIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SD4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
OCT.												
07	1120	62	7.0	228	166	461	7.2	317	0	2010	44	.4
31		69	4.2	104	124			105	0	762	17	
NOV.										***		
06	1615	74	2.9	132	38			84	0	745	11	
07	1715	70	6.0	216	90			114	0	1580	36	
08	1700	63	3.1	153	40			91	0	818	12	
JAN.												
15	1145	65		185	161	362	20	458	0	1600	51	
FE8.												
13	1100	103	6.6	214	135	384	6.1	456	0	1540	41	.3
APR.												
22	1000	32	4.6	253	185	558	9.3	333	0	2150	61	.4
MAY												
13	1630	50	5.7	181	136	377	8.0	350	0	1420	44	.4
JUNE												
05	1215	1030	5.1	80	42	64	7.5	253	0	298	11	.4
JULY												
10	1330	137	6.9	162	124	309	7.5	361	0	1220	34	• 5
AUG.												
06	1550	71	6.3	185	141	379	8.5	297	0	1610	38	.7
SEP.								_				_
08	1730	67	5.5	285	159	451	9.6	399	0	1870	42	.5

DATE	NITRATE (N) (MG/L)	DIS- SDLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MS/L)	SOLVED SOLIDS (SUM OF CDNSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BDNATE HARD- NESS (MG/L)	SODIUM AD- SDRP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH {UNITS}	
001.							1250	990	5.7	3470	7.8	
07		300	3200	3080	4.35	536				1320	7.8	
31			1280	1120	1.74	238	770	684	1.0	1320	1.0	
NOV.										1530	7.3	
06 • • •			1180	1140	1.60	236	488	419	5.8			
07			2490	2390	3 - 39	471	910	817	3.4	2730	7.3	
08			1260	1250	1.71	241	548	473	4.7	1660	7.5	
JAN.												
15				2600	3 - 54	474	1120	744	4.7	3040	B. 0	
FE8.												
13		200	2700	2570	3.67	1140	1090	716	5.l	2960	7.7	
APR.												
22		240	3910	3390	4.61	338	1390	1120	6.5	4070	7.8	
MAY												
13		240	2570	2340	3.50	347	1010	725	5.2	2890	8.1	
JUNE												
05		90	711	634	.97	1980	370	163	1.4	937	8.2	
JULY					•							
10	.10	250	2210	2040	2.77	817	912	616	4.5	2510	8.0	
AUG.	•10	2,50	2210	2010		01.						
05	.10	290	2620	2520	3.43	502	1040	796	5.1	2900	8 . 2	
SEP.	•10	270	2020	2,20	3. 43	202						
	.30	260	3220	3020	4.11	582	1360	1040	5.3	3490	8.1	
08	. 50	260	3220	3020	7.11	202	1,00	1010		3170		

# 09328500 SAN RAFAEL RIVER NEAR GREEN RIVER, UTAH--Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	Jrc	.01110 001	1DOCTANOL	THICKOMIC		ILY MEASU		CIODER I	07 10 JEF	TENDER I	,,,,	
DAY	nc r	VIIV	DFC	JAN	FFB	MAR	APR	YAM	JUN	JUL	AUG	SEP
1	3330		3230	3720	3090	3500		3390	1120	1390		
2	3370	2160	3250	3310	3210	4260		3820	1049	1420		
4	3537	2???	2000	3900	3500	3640	3950	3800				
5	3570	2917	3080 3050	4230 4320		3620 3650	4150 4140	3890 394)	925			
6	3570	1530	2052									
7	3370	1530 2730	2850	3670		3970	4140 429)	3950	908	2120	2800	
В	3260	1650			~	4270		3660	1030	2400		
9	3300	2970		3380	2790	4130	1610	3680	1420	2440		
10		3230	3031	3370	2773	3980	359)	2849		2560		
11	3180		3040	3440		4010	3850	2780	2010			
12	3243	7363	3147	3393	~	3910	3460	2730	1769	2700		
13	3220 3270	3460	3130 2883	3240 2910	2990 2910	3930 3910	3400 3600		1210			
15	3150		2863	2910	2900	3970	3780	3020			1320	
16 17	3160 3113	2250	2850 2860	2720 2700	3200 3200	3930	3680	3520		2040		
18	7117	2210	2790	2600	3330		3750 3760	3510		2840 1760	1330	
19	3160	3210	279)	2630	3380		3830	1620				
20	3190	3650	2443	2660	3450			1150		1570		
21	3670	3070	2797	2680	3390			990	1260		2750	
2?	3360	3320	277)	2790	3430	3990		1220	1000			
23	3350	3770	2660	2983	4070		4650	1310	977			
24 25	3040 3130	3800 3160	262) 281)	2960 2900		4150 4060	4130 4020	1453 1340	L040			
			2017			7000	4020	1340	1040			
26	3340	3160	3110	2993	3140	4150	3990		1940			
27 29	3340 3480	3260 337)	3110 3340	2910	3130 3210	4060 4120	3460 3750			2410	1830	
29	3480	3490	3341		5210	3450	3750	1220		2410	1510	
30	3420	3390		3340		3960		1140				
31	1320		3767	3200		3940		1130				
AVG	3240	2930	2983	3180								
			DED 471105	(00) 05 11			CTODER 10		TEMBER 10	70		
		TEM	PERATURE	(°C) OF W	ATER, WAT	ER YEAR O	CTOBER 19	69 TO SEP	TEMBER 19	70		
YAY	ост	TEM	PERATURE	J44	ATER, WAT (ONCE-DA	ER YEAR O	CTOBER 19 REMENT)	69 TO SEP	TEMBER 19	JUL	AUG	SFP
			nec	JAN	(ONCE-DA	ILY MEASU MAR	REMENT)	YAY	JUN	JUL	AUG	\$FP 
7AY 1 2	14.0	NOV		J44 0.0	(ONCE-DA	MAR 7.0	APR	MAY 14.0 16.0				
1 ? 3	14.0 13.0 10.0	NOV  5.0 8.0	0.0 0.0	0.0 0.0 044	ONCE-DA FEB 0.0 0.0 8.0	7.0 10.0 9.0	APR 12.0	MAY 14.0 16.0 19.0	JUN 18.0 18.0	JUL 24.0 25.0		
1 ? 3 4	14.0 13.0 10.0 9.0	NOV 5.0 9.0	0.0 0.0 0.0	JAN 0.0 0.0	0.0 0.0 0.0 8.0	7.0 10.0 9.0 9.0	APR 12.0 11.0	MAY 14.0 16.0 19.0 22.0	JUN 18.0	JUL 24.0 25.0		
1 ? 3	14.0 13.0 10.0	NOV  5.0 8.0	0.0 0.0	0.0 0.0 044	ONCE-DA FEB 0.0 0.0 8.0	7.0 10.0 9.0	APR 12.0	MAY 14.0 16.0 19.0	JUN 18.0 18.0 	JUL 24.0 25.0		
1 ? 3 4 5	14.0 13.0 10.0 9.0	NOV 5.0 9.7 8.0	0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0	ONCE-DA FEB 0.0 0.0 8.0	MAR 7.0 10.0 9.0 9.0 7.0	APR 12.0 11.0 10.0	MAY 14.0 16.0 19.0 22.0 21.0	JUN 18.0 18.0 	JUL 24.0 25.0   24.0		
1 ? 3 4 5	14.0 13.0 10.0 9.0	NOV  5.0 9.2  8.0 7.0	0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0	ONCE-DA FEB 0.0 0.0 9.0 9.0	7.0 10.0 9.0 9.0 7.0	APR 12.0 11.0 10.7	MAY 14.0 16.0 19.0 22.0 21.0	JUN 18.0 18.0 19.0 19.0	JUL 24.0 25.0  24.0	28.2	
1 ? 3 4 5	14.0 13.3 12.0 9.0 	NOV 5.0 3.0 2.0 8.0 7.0 7.0	0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0	ONCE-DA FEB 0.0 0.0 9.0 9.0	MAR 7.0 10.0 9.0 7.0 7.0	APR	MAY 14.0 16.0 19.0 22.0 21.0 20.0 17.0	JUN 18.0 18.0 19.0 16.0 17.0	JUL 24.0 25.0  24.0 22.0		
1 2 3 4 5 6 7 8	14.0 13.0 10.0 9.0	NOV  5.0 9.2  8.0 7.0	0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0	ONCE-DA FEB 0.0 0.0 9.0 9.0	7.0 10.0 9.0 9.0 7.0	APR 12.0 11.0 10.0	MAY 14.0 16.0 19.0 22.0 21.0	JUN 18.0 18.0 19.0 19.0	JUL 24.0 25.0  24.0	28.3	
1 ? 3 4 5 6 7 8	14.0 13.3 12.0 9.0  13.0 13.3 14.0	NOV 5.0 8.0 7.0 7.0 9.0 9.0	0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0	ONCE-DA FEB 0.0 0.0 8.0 4.0 4.0	MAR 7.0 10.0 9.0 9.0 7.0 9.0 1.0 9.0 1.0 6.0	APR 12.0 11.0 10.0 12.0 10.0 12.0 14.0	MAY 14.0 16.0 19.0 22.0 21.0 20.0 17.0 15.0 17.0	18.0 18.0 18.0 19.0  16.0 17.0 15.0	JUL 24.0 25.0  24.0  22.0 18.0	28.2	
1 ? 3 4 5 6 7 8 9	14.0 13.3 12.0 2.0  13.0  13.3 14.0	8.0 7.0 7.0 7.0 7.0 9.0 9.0	0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	MAR 7.0 10.0 9.0 7.0 9.0 7.0 9.0 11.0 6.0	APR	MAY 14.0 16.0 19.0 22.0 21.0 20.0 17.0 15.0 17.0	JUN 18.0 18.0 18.0 19.0 16.0 17.0 15.0	JUL 24.0 25.0  24.0  22.0 18.0 24.0	28.9	
1 ? 3 4 5 6 7 8	14.0 13.3 12.0 9.0  13.0 13.3 14.0	NOV 5.0 8.0 7.0 7.0 9.0 9.0	0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0	ONCE-DA FEB 0.0 0.0 9.0 4.0 4.0	MAR 7.0 10.0 9.0 7.0 7.0 9.0 11.0 6.0 12.0	APR 12.0 11.0 10.0 10.0 12.0 14.0 15.0 14.0 15.0 12.0	MAY  14.0 16.0 19.0 22.0 21.0  20.0 17.0 15.0 17.0 18.0	18.0 18.0 18.0 19.0 19.0 16.0 17.0 15.0	JUL 24.0 25.0  24.0  22.0 18.0 24.0	28.9	
1 2 3 4 5 6 7 8 9 10 11 12 13	14.0 13.3 10.0 4.0  13.0  13.3 14.0  7.0 6.0 5.0	NOV  9.0 7.0 7.0 9.0 4.0 9.0 9.0	0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	ONCE-DA FEB 0.0 0.0 8.0 4.0 4.0 7.0	MAR 7.0 10.0 9.0 7.0 7.0 11.0 6.0 9.0 11.0 6.0 12.0 7.0	APR	14.0 16.0 19.0 22.0 21.0 20.0 	JUN 18.0 18.0 18.0 19.0 16.0 17.0 15.0	JUL 24.0 25.0  24.0 24.0 18.0 24.0	28.2	
1 2 3 4 5 5 6 7 8 9 10 11 11 12 13	14.0 13.3 10.0 2.0  13.0  13.3 14.0  7.0 6.0	NOV 5.0 6.2 8.0 7.0 7.0 8.0 8.0 8.0 8.0	0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	ONCE-DA FEB 0.0 0.0 9.0 4.0 4.0	MAR 7.0 10.0 9.0 7.0 7.0 9.0 11.0 6.0 12.0	APR 12.0 11.0 10.0 10.0 12.0 14.0 15.0 14.0 15.0 12.0	MAY  14.0 16.0 19.0 22.0 21.0  20.0 17.0 15.0 17.0 18.0	18.0 18.0 18.0 19.0 19.0 16.0 17.0 15.0	JUL 24.0 25.0  24.0  22.0 18.0 24.0	28.9	
1 2 3 4 5 6 7 8 9 10 11 12 13	14.0 13.3 10.0 4.0  13.0  13.3 14.0  7.0 6.0 5.0	NOV	0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB  0.0 0.0 9.0 9.0	MAR 7.0 10.0 9.0 7.0 7.0 11.0 6.0 9.0 11.0 6.0 12.0 7.0	APR 12.0 11.0 10.0 10.0 12.0 14.0 14.0 12.0 11.0 11.0 12.0 12	MAY 14.0 16.0 19.0 22.0 21.0 21.0 21.0 17.0 17.0 18.0 14.0 23.0	JUN 18.0 18.0 19.0 19.0 17.0 15.0 14.0 12.0	24.0 25.0 25.0 24.0 24.0 22.0 18.0 24.0	28.9	
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17	14.0 13.3 10.0 4.0  13.0 14.0 6.0 5.0 5.0 9.0 7.2	NOV	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 0.0 0.0 9.0 9.0 4.0 4.0 4.0 6.0 3.0	MAR 7.0 10.0 9.0 9.0 9.0 11.0 6.0 11.0 6.0 12.0 9.0	APR 12.3 11.3 10.7 12.0 10.0 12.0 14.0 14.0 15.0 14.0 11.0 11.0 11.0 11.0 11.0	14.0 16.0 19.0 22.0 21.0 20.0 17.0 17.0 18.0 14.0	18.0 18.0 18.0  19.0 16.0  17.0 15.0  14.0 12.0	24.0 25.0 	28.9	
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18	14.0 13.3 12.0 2.0 	Nov 	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	(ONCE-DA FEB 0.0 0.0 9.0   4.0 4.0  7.0 5.0 3.0  6.0 4.0 4.0	MAR 7.0 10.0 9.0 9.0 9.0 11.0 6.0 12.0 7.0 12.0 7.0	APR	MAY 14.0 16.0 19.0 22.0 21.0 20.0 17.0 15.0 16.0 14.0 23.0 21.0	18.0 18.0 18.0 19.0 19.0 17.0 15.0 14.0 12.0 16.0	24.0 25.0 25.0 24.0 24.0 22.0 18.0 24.0	28.9	
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17	14.0 13.3 10.0 a.0  13.0  13.0  14.0  7.0 6.0 5.0 5.0 5.0 9.0 7.9  8.0	NOV	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	FEB 0.0 0.0 9.0 9.0 4.0 4.0 4.0 6.0 3.0	MAR 7.0 10.0 9.0 9.0 7.0 9.0 11.0 6.0 11.0 9.0 12.0 7.0 9.0 12.0 9.0 12.0 9.0 12.0 9.0	APR 12.3 11.3 10.7 12.0 10.0 12.0 14.0 14.0 15.0 14.0 11.0 11.0 11.0 11.0 11.0	MAY 14.0 16.0 19.0 22.0 21.0 21.0 21.0 17.0 17.0 18.0 14.0 23.0	18.0 18.0 18.0  19.0 16.0  17.0 15.0  14.0 12.0	24.0 25.0 	28.9	
1 2 3 4 5 5 6 7 9 9 10 11 12 13 14 15 16 17 18 19 20	14.0 13.0 10.0 4.0 	NOV 	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	CONCE-DA FEB 0.0 0.0 9.7 4.0 4.0 7.0 0.0 3.7 6.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	MAR 7.0 10.0 9.0 9.0 7.0 9.0 11.0 6.0 11.0 6.0 12.0 9.0 12.0 9.0 12.0 9.0	APR 12.0 11.3 10.7 12.0 14.0 14.0 15.0 14.0 11.0 11.0 11.0 11.0 11.0 11.0 11	MAY 14.0 16.0 19.0 22.0 21.0 20.0 17.0 17.0 18.0 14.0 23.0 21.0 21.0 21.0 17.0	18.0 18.0 18.0 19.0 19.0 17.0 15.0 12.0 14.0 12.0	24.0 25.0 25.0 25.0 26.0 26.0 27.0 27.0 28.0 28.0 28.0	28.2	
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 21	14.0 13.0 13.0 13.0 13.0 13.0 14.0 5.0 5.0 5.0 7.2 9.0 7.2 9.0 9.0 9.0	Nov 	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	CONCE-DA FEB 0.0 0.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	ILY MEASU MAR 7.0 10.0 9.0 7.0 9.0 11.0 6.0 11.0 6.0 12.0 12.0 12.0 9.0 12.0 9.0 12.0 9.0 12.0 9.0	APR	MAY 14.0 16.0 19.0 19.0 22.0 21.0 20.0 17.0 18.0 18.0 14.0 23.0 21.0 17.0 17.0 17.0	JUN 19.0 18.0 19.0 19.0 19.0 17.0 15.0 12.0 14.0 12.0 16.0	24.0 25.0 25.0 24.0 22.0 18.0 24.0 27.0 27.0	28.7	
1 2 3 4 5 5 6 7 9 9 10 11 12 13 14 15 16 17 18 19 20	14.0 13.0 13.0 4.0  13.0 14.0 14.0 5.0 5.0 9.0 7.0 9.0 7.0 9.0 9.0 9.0 9.0	NOV 	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	CONCE-DA FEB 0.0 0.0 9.7 4.0 4.0 7.0 0.0 3.7 6.0 4.0 4.0 6.0 6.0 6.0	MAR 7.0 10.0 9.0 7.0 9.0 11.0 6.0 11.0 6.0 11.0 9.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 16.0 16.0 17.0 17.0 17.0 18.0	APR 12.0 11.3 10.7 12.0 14.0 14.0 15.0 14.0 11.9 12.0 11.9 12.0 11.9 12.0 11.9	MAY 14.0 16.0 19.0 122.0 21.0 22.0 21.0 17.0 18.0 14.0 21.0 21.0 21.0 17.0 17.0 17.0 19.0 19.0	18.0 18.0 18.0 19.0 19.0 17.0 15.0 12.0 14.0 12.0	JUL 24.0 25.0 25.0 24.0 24.0 24.0 27.0 27.0 28.0 28.0 28.0	28.0	
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	14.0 113.0 13.0 13.0 13.0 13.0 14.0 14.0 5.0 5.0 5.0 9.0 7.0 9.0 9.0 9.0 9.0 9.0	NOV	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	CONCE-DA FEB 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	MAR 7.0 10.0 9.0 9.0 7.0 9.0 11.0 6.0 11.0 6.0 12.0 9.0 12.0 9.0 12.0 9.0 12.0 9.0 12.0 9.0 12.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	REMENT)  APR  12.0 11.3 10.0 12.0 10.0 12.0 14.0 15.0 11.0 11.0 12.0 11.0 12.0 11.0 11.0 12.0 11.0 11	14.0 16.0 16.0 19.0 22.0 21.0 21.0 17.0 18.0 14.0 23.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	18.0 18.0 19.0 19.0 	24.0 25.0 25.0 24.0 22.0 18.0 24.0 27.0 28.0 28.0	28.7	
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	14.0 13.0 13.0 13.0 13.0 13.0 14.0 5.0 5.0 5.0 7.2 9.0 7.2 9.0 9.0 9.0	NOV	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	CONCE-DA FEB 0.0 0.0 9.7 4.0 4.0 7.0 0.0 3.7 6.0 4.0 4.0 6.0 6.0 6.0	MAR 7.0 10.0 9.0 7.0 9.0 11.0 6.0 11.0 6.0 11.0 9.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 15.0 15.0 15.0 16.0 16.0 17.0 17.0 17.0 18.0	APR	MAY 14.0 16.0 19.0 122.0 21.0 22.0 21.0 17.0 18.0 14.0 21.0 21.0 21.0 17.0 17.0 17.0 19.0 19.0	18.0 18.0 18.0 19.0 19.0 19.0 15.0 15.0 12.0 16.0  16.0  25.0 24.0	JUL 24.0 25.0 25.0 24.0 24.0 24.0 27.0 27.0 28.0 28.0 28.0	28.0	
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	14.0 113.0 13.0 13.0 13.0 13.0 14.0 14.0 6.0 5.0 5.0 5.0 9.0 7.0 9.0 9.0 9.0 9.0 9.0	NOV	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	(ONCE-DA FEB 0.0 0.0 9.7 4.0 4.0 4.0 5.0 3.7 7.0 5.0 3.7 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	MAR 7.0 10.0 9.0 7.0 9.0 7.0 9.0 11.0 6.0 11.0 6.0 12.0 9.0 12.0 9.0 12.0 9.0 12.0 9.0 12.0 9.0 9.0 12.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	APR	MAY  14.0 16.0 19.0 122.0 21.0 22.0 17.0 15.0 17.0 16.0 21.0 21.0 21.0 21.0 17.0 19.0 19.0 19.0 19.0 17.0	18.0 18.0 19.0 19.0 	24.0 25.0 	28.0	
1 2 3 4 5 5 6 7 7 8 9 9 10 11 12 13 114 15 16 17 18 19 20 21 22 23 24 25 26 27	14.0 13.0 13.0 13.0 13.0 14.0 14.0 5.0 5.0 9.0 7.0 9.0 7.0 9.0 9.0 9.0 9.0 11.0	NOV	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	(ONCE-DA FEB 0.0 0.0 9.0 9.0 9.0 9.0 9.0 9.0 4.0 4.0 4.0 4.0 4.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	MAR 7.0 10.0 9.0 9.0 6.0 11.0 6.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 6.0 7.0 9.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	REMENT)  APR  12.0 11.0 10.0 11.0 10.0 14.0 15.0 11.0 11.0 11.0 12.0 11.0 14.0 12.0 11.0 12.0 14.0 15.0 16.0 16.0 16.0 15.0 16.0 16.0 16.0 16.0 16.0	14.0 16.0 19.0 19.0 22.0 21.0 21.0 17.0 18.0 14.0 23.0 21.0 21.0 21.0 17.0 17.0 17.0 17.0	18.0 18.0 18.0 19.0 	24.0 25.0 25.0 26.0 26.0 18.0 26.0 27.0 27.0 28.0 28.0 27.0	28.0	
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 32 4 25 26 27 7 28	14.0 13.0 13.0 13.0 13.0 13.0 14.0 5.0 5.0 5.0 7.2 18.0 9.0 9.0 9.0 9.0 11.0	NOV	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	CONCE-DA FEB 0.0 0.0 9.7	MAR 7.0 10.0 9.0 7.0 9.0 7.0 9.0 11.0 6.0 11.0 6.0 12.0 9.0 12.0 9.0 12.0 9.0 12.0 9.0 12.0 9.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	APR	14.0 16.0 19.0 22.0 21.0 20.0 17.0 15.0 17.0 14.0 21.0 21.0 21.0 17.0 17.0 17.0 17.0 17.0 17.0	18.0 18.0 19.0 19.0 	24.0 25.0 	28.0	
1 2 3 4 5 5 6 7 7 8 9 9 10 11 12 13 114 15 16 17 18 19 20 21 22 23 24 25 26 27	14.0 13.0 13.0 13.0 13.0 14.0 14.0 5.0 5.0 9.0 7.0 9.0 7.0 9.0 9.0 9.0 9.0 11.0	NOV	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	(ONCE-DA FEB 0.0 0.0 9.0 9.0 9.0 9.0 9.0 9.0 4.0 4.0 4.0 4.0 4.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	MAR 7.0 10.0 9.0 9.0 6.0 11.0 6.0 12.0 12.0 12.0 12.0 13.0 13.0 13.0 14.0 6.0 7.0 9.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15	APR	MAY  14.0 16.0 19.0 12.0 22.0 21.0 20.0 17.0 18.0 18.0 21.0 21.0 21.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	19.0 19.0 19.0 19.0 17.0 15.0 12.0 16.0 12.0 16.0 25.0 26.0 22.0 22.0 22.0 22.0 22.0	24.0 25.0 25.0 26.0 24.0 26.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 27.0	28.0	
1 2 3 4 5 5 6 7 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 20 22 23 24 25 26 27 28 9 9	14.0 13.0 13.0 13.0 14.0 14.0 14.0 5.0 5.0 7.0 9.0 7.9 9.0 7.9 9.0 9.0 11.	NOV	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	CONCE-DA FEB O.O O.O O.O O.O O.O O.O O.O O.O O.O O.	MAR 7.0 10.0 9.0 9.0 7.0 9.0 11.0 6.0 12.0 7.0 9.0 12.0 7.0 9.0 12.0 7.0 9.0 12.0 7.0 9.0 12.0 7.0 9.0 12.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	APR	14.0 16.0 19.0 22.0 21.0 22.0 21.0 22.0 17.0 17.0 18.0 14.0 23.0 21.0 21.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	18.0 18.0 18.0 19.0 	24.0 25.0 25.0 26.0 22.0 18.0 24.0 27.0 27.0 28.0 27.0 27.0 27.0	28.0	
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 25 26 27 28 30 30	14.0 13.0 13.0 13.0 13.0 13.0 14.0 5.0 5.0 5.0 5.0 7.2 18.0 9.0 9.0 9.0 9.0 9.0 11.0	NOV	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	JAN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	(ONCE-DA FEB 0.0 0.0 9.7	MAR 7.0 10.0 9.0 7.0 9.0 7.0 9.0 11.0 6.0 11.0 6.0 12.0 9.0 12.0 9.0 12.0 13.0 9.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13	APR	MAY  14.0 16.0 19.0 12.0 22.0 21.0 20.0 17.0 18.0 18.0 21.0 21.0 21.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0 17.0 18.0	19.0 19.0 19.0 19.0 17.0 15.0 12.0 16.0 12.0 16.0 25.0 26.0 22.0 22.0 22.0 22.0 22.0	24.0 25.0 25.0 26.0 24.0 26.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 27.0	28.0	

#### 09330210 PLEASANT CREEK NEAR CAINEVILLE, UTAH

LOCATION.--Lat 38°16'20", long 111°05'30", in SW\nE\frac{1}{2} sec.19, T.29 S., R.7 E., Wayne County, at gaging station 0.2 mile upstream from mouth with the confluence of Fremont River and 6.5 miles west of Caineville.

DRAINAGE AREA, -- 115 sq mi, approximately.

PERIOD OF RECORD. -- Sediment records: April 1969 to September 1970.

EXTREMES. --April to September 1969:
Sediment concentrations: Maximum daily, 55,800 mg/l Aug. 12; minimum daily, 3 mg/l July 2.
Sediment discharge: Maximum daily, 40,900 tons Aug. 29; minimum daily, 0.01 ton July 2.

#### EXTREMES . -- 1969-70:

Sediment concentrations: Maximum daily, 15,400 mg/l Aug. 4; minimum daily, 8 mg/l June 24. Sediment discharge: Maximum daily, 1,750 tons Aug. 4; minimum daily, 0,03 ton June 27.

Period of record: Sediment concentrations: Maximum daily, 55,600 mg/l Aug. 12, 1969; minimum daily, 3 mg/l July 2, 1969. Sediment discharge: Maximum daily, 40,900 tons Aug. 29, 1969; minimum daily, 0.01 ton July 2, 1969.

#### SUSPENDED-SEDIMENT DISCHARGE, APRIL TO SEPTEMBER 1969

		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)
1	6.0	3670	59	4.0	1020	11	24	825	53
2	6.0	367C	59	3.6	905	8.8	22	1030	61
3	6.0	1560	25	3.2	1000	8.6	21	917	52
4	5.4	1440	21	3.2	1000	8.6	18	617	30
5	4.9	1380	18	4.9	1810	24	14	217	8.2
6	4.9	1380	18	12	1000	32	12	133	4.3
7	4.4	878	10	14	2000	76	13	211	7.4
8	4.0	1060	11	11	1580	47	9.7	76	2.0
9	3.6	976	9.5	11	1580	47	8.8	76	1.8
10	4.0	1230	13	8 • 8	1520	36	7.3	61	1.2
11	4.0	2020	22	8.8	1000	24	6.0	25	.41
12	4.0	868	9.4	9.7	1150	30	8 • C	38	.82
13	4.9	1000	13	9.7	1150	30	8 • 8	55	1.3
14	4.9	1230	16	6.6	954	17	7.3	61	1.2
15	5.4	1150	17	6.6	1120	20	8.0	463	10
16	4.9	1100	15	6.6	842	15	7.3	304	6.0
17	4.4	1050	12	11	1500	45	21	10200	578
18	4.9	1000	13	14	2490	94	7.3	1270	25
19	4.4	950	11	40	5000	540	4.4	471	5.6
20	2.6	903	6.3	47	1000	127	4.4	471	5.6
21	2.9	1280	10	27	7680	560	4.0	389	4.2
22	6.0	1250	2 C	16	3010	130	3.6	319	3.1
23	4.4	1220	14	16	2040	88	3.2	255	2 • 2
24	4.0	1180	13	19	2530	130	2.9	60	.47
25	3.2	1150	9.9	21	3700	210	4.0	111	1.2
26	4.4	1120	13	31	3230	270	2.9	60	.47
27	4.4	1090	13	35	6030	570	2.3	29	.18
28	3.6	741	7.2	22	3700	220	1.6	72	•31
29	4.0	1020	11	21	1450	82	1.5	49	.20
30	4.4	1090	13	29	2810	220	1.6	46	.20
31				27	1530	112			
TOTAL	134.9		502.3	499.7		3833.0	259.9		867.36

## 09330210 PLEASANT CREEK NEAR CAINEVILLE, UTAH -- Continued

# SUSPENDED-SEDIMENT DISCHARGE, APRIL TO SEPTEMBER 1969

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAO (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)
1	1.5	12	0.05	0.80	162	0.35	0.80	1200	2.6
2	1.1	3	.01	2.7	1780	13	• 90	1320	3.2
3	1.5	12	.05	.80	162	. 35	.90	1320	3.2
4	1.8	23	.11	-80	147	.32	1.8	2470	12
5	2.1	42	.24	.80	132	• 29	1.1	1550	4.6
6	2.6	68	.48	.80	117	•25	.90	1320	3.2
7	2.9	96	.75	.80	102	• 22	.90	1320	3.2
8	3.2	127	1.1	.80	87	.19	34	32500	13700
9	2.9	96	.75	.80	72	.16	15	20700	840
10	2.6	68	.48	.80	57	•12	38	28300	28800
11	2.9	96	.75	.80	42	.09	25	24900	9040
12	2.9	96	.75	32	55600	4800	8.0	648	14
13	5.4	631	9.2	19	7410	380	8.0	648	14
14	2.6	476	3.3	11	3160	94	8.0	648	14
15	2.4	321	2.1	6.6	1570	28	8.0	648	14
16	2.4	166	1.1	4.0	769	8.3	4.9	212	2.8
17	2.6	11	.08	3.2	463	4.0	4.4	160	1.9
18	5.4	96	1.4	6.6	1570	28	4.4	160	1.9
19	13	25800	5940	11	3160	94	3.6	103	1.0
20	18	53800	15300	11	3000	89	3.6	103	1.0
21	3.2	1500	13	11	2800	83	5.4	267	3.9
22	2.3	870	5.4	11	2600	77	5.4	267	3.9
23	2.1	758	4.3	12	2200	71	4.9	212	2.8
24	2 • 1	758	4.3	12	1800	58	4.9	212	2.8
25	1.9	643	3.3	12	1400	45	4.4	160	1.9
26	1.6	486	2.1	13	1100	39	4.4	160	1.9
27	1.4	397	1.5	13	900	32	4.4	160	1.9
28	1.2	309	1.0	11	800	24	4.4	160	1.9
29	1.6	486	2.1	62	36900	40900	4.9	212	2.8
30	1.5	444	1.8	4.0	1200	13	4.9	212	2.8
31	11	774	23	.90	1320	3.2			
TOTAL	109.7		21324.50	277.00		46885.84	220.20		52503.2

TOTAL DISCHARGE PERIOD (CFS-DAYS)
TOTAL LOAD FOR PERIOD (TONS)

1501.40 125916.20

	OCTOBER				NDVEMBER		DECEMBER			
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/OAY)	MEAN DISCHARGE (CFS)	MEAN CONCEY- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
1	5.2 4.7	199 169	2.8 2.1	7.3 6.2	345 269	6.8 4.5	2.5	237 237	1.6	
3	4.7	169	2.1	5.7	208	3.2	2.5	237	1.6	
2 3 4	5.2	199	2.8	6.2	269	4.5	2.5	237	1.6	
5	4.3	146	1.7	6.2	269	4.5	2.2	185	1.1	
•	4.5				,	***			•••	
6	4.3	146	1.7	6.2	269	4.5	2.5	237	1.6	
7	4.3	146	1.7	6.2	269	4.5	2.5	237	1.6	
8	4.3	146	1.7	3.9	133	1.4	1.9	144	.74	
9	3.9	123	1.3	2.5	62	.42	2.5	237	1.6	
10	3.9	123	1.3	2.2	49	. 29	2.5	237	1.6	
	•••									
11	4.3	146	1.7	2.8	74	.56	2.5	237	1.6	
12	3.9	123	1.3	2.5	62	• 42	2.5	237	1.6	
13	3.5	106	1.0	2.2	49	.29	2.5	237	1.6	
14	3.9	123	1.3	2.2	49	.29	2.5	237	1.6	
15	3.9	123	1.3	2.2	49	.29	2.8	304	2.3	
16	3.9	123	1.3	3.2	93	.80	2.5	237	1.6	
17	4.7	169	2.1	2.2	49	.29	1.9	144	.74	
18	4.7	169	2.1	1.2	34	.11	2.5	237	1.6	
19	3.9	123	1.3	1.7	37	.17	2.5	237	1.6	
20	3.9	123	1.3	1.3	34	.12	2.5	237	1.6	
21	4.3	146	1.7	1.9	41	•21	2.5	237	1.6	
22	ıi.	673	20	2.5	62	.42	2.5	237	1.6	
23	12	771	25	2.2	49	.29	2.5	237	1.6	
24	10	556	15	1.9	41	•21	2.5	237	1.6	
25	9.7	535	14	2.2	49	• 29	2.5	237	1.6	
26	10	556	15	2.5	62	•42	2.5	237	1.6	
27	11	673	20	2.5	62	. 42	2.5	237	1.6	
28	9.7	535	14	2.2	49	.29	2.5	237	1.6	
29	7.3	345	6.8	2.5	62	. 42	2.5	237	1.6	
30	6.7	291	5.3	2.5	62	• 42	2.5	237	1.6	
31	7.3	345	6.8				2.5	237	1.6	
TOTAL	184.4		177.5	97.0		41.34	76.3		48.08	

# 09330210 PLEASANT CREEK NEAR CAINEVILLE, UTAH .- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		SUSPE	NDED-SEDIMENT D	ISCHARGE, WATE	ER YEAR OCT	TDBER 1969 TO S	EPTEMBER 1970		
		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (tons/day)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	2.5 2.5 2.5 2.5 2.5	237 237 237 237 237	1.6 1.6 1.6 1.6	2.5 2.5 2.5 2.2 2.8	237 237 237 185 304	1.6 1.6 1.1 2.3	3.5 3.5 3.9 3.9 4.3	466 466 570 570 672	4.4 4.4 6.0 6.0 7.8
6 7 8 9	2.5 2.5 2.5 2.5 2.5	237 237 237 237 237	1.6 1.6 1.6 1.6	2.5 3.2 3.2 2.8 3.9	237 394 394 304 570	1.6 3.4 3.4 2.3 6.0	4.7 4.7 4.7 4.7 4.3	788 788 788 788 672	10 10 10 10 7.8
11 12 13 14	2.5 2.5 2.5 2.5 2.5	237 237 237 237 237 237	1.6 1.6 1.6 1.6	3.2 3.5 3.5 3.5 3.5	394 466 466 466 466	3.4 4.4 4.4 4.4	3.2 2.8 3.5 3.2 3.9	394 304 466 394 570	3.4 2.3 4.4 3.4 6.0
16 17 18 19 20	2.5 2.5 2.5 2.5 2.5	237 237 237 237 237	1.6 1.6 1.6 1.6	3.5 3.5 3.5 3.2 2.5	466 466 466 394 237	4.4 4.4 4.4 3.4 1.6	3.9 3.2 1.9 2.2 1.9	573 394 160 185 160	6.0 3.4 .82 1.1
21 22 23 24 25	2.5 2.5 2.5 2.5 2.5	237 237 237 237 237 237	1.6 1.6 1.6 1.6	2.8 3.9 3.5 3.9 3.5	304 570 466 570 466	2.3 6.0 4.4 6.0	1.9 1.9 2.2 2.5	160 160 185 237 89	.82 .82 1.1 1.6 .36
26 27 28 29 30	2.5 2.5 2.5 2.5 2.5	237 237 237 185 237 237	1.6 1.6 1.6 1.1 1.6	3.5 3.5 3.9 	466 466 570 	4.4 4.4 6.0 	1.3 1.3 1.5 3.2 3.2	66 66 89 394 394 237	.23 .23 .36 3.4 3.4
TOTAL	77.2		49.1	90.0		102.0	94.9		121.96
		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TCNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	2.2 1.9 1.7 1.5 1.9	185 160 96 24 409	1.1 .82 .44 .13 2.1	1.9 2.2 1.9 1.7	270 382 400 419 740	1.4 2.3 2.1 1.9 3.4	3.2 2.5 2.5 1.9 2.8	170 190 194 49 154	1.5 1.3 1.3 .25 1.2
6 7 8 9	1.9 2.2 1.7 1.2	56 168 222 65 132	.29 1.0 1.0 .21 .43	1.9 1.9 1.9 1.7	1060 1380 527 872 920	5.4 7.1 2.7 4.0 4.7	3.9 4.3 4.7 5.2 7.3	258 362 428 444 842	2.7 4.2 5.4 6.2
11 12 13 14 15	1.0 1.0 1.2 1.7 2.2	140 140 144 1020 400	.38 .38 .47 4.7 2.4	1.9 1.5 1.5 1.3 1.9	975 363 551 120 263	5.0 1.5 2.2 .42 1.3	9.1 6.7 5.7 4.7 5.2	1240 574 383 274 164	30 10 5.9 3.5 2.3
16 17 18 19 20	1.5 2.2 2.8 2.8 3.2	380 356 394 370 338	1.5 2.1 3.0 2.8 2.9	3.2 17 20 19 17	2830 3230 2150 1000 2090	24 148 116 51 96	3.5 3.9 2.2 2.5 2.5	127 90 51 76 14	1.2 .95 .30 .51
21 22 23 24 25	3.9 3.5 3.2 2.8 2.8	409 315 92 94 92	4.3 3.0 .79 .71 .70	15 13 12 11 9•1	2300 1130 1610 1480 1230	93 40 52 44 30	2.5 2.5 2.5 2.2 1.2	24 34 21 8 14	.16 .23 .14 .05
26 27	2.8 2.8	613 532	4.6 4.0	10 7.9	980 730	26 16	1.5	20 11	.08 .03
28 29 30 31	2.5 2.5 1.9	331 127 155	2.2 .86 .80	5.2 4.7 3.9 3.5	480 233 412 290	6.7 3.0 4.3 2.7	.64 1.2 1.2	29 56 56	.05 .18 .18

# 09330210 PLEASANT CREEK NEAR CAINEVILLE, UTAH--Continued

# SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.3	66	0.23	6.2	1610	27	43	1000	116
2	1.2	56	.18	5.7	1170	18	6.0	500	8.1
3	1.2	56	.18	5.2	926	13	4.9	295	3.9
4	1.0	37	.10	42	15400	1750	6.6	505	9.0
5	1.3	66	.23	5.5	1080	16	11	1180	35
6	11	13000	386	14	5030	190	8.9	832	20
7	11	8800	261	15	4630	188	7.3	812	16
8	4.7	1540	20	4.9	831	11	7.3	812	16
9	11	15000	1470	8.1	1920	42	4.9	295	3.9
10	12	11000	356	6.6	1400	25	4.9	295	3.9
11	11	3400	101	2.1	176	1.0	4.4	244	2.9
12	17	6500	298	1.2	56	.18	5.5	350	5.2
13	9.7	2700	71	6.6	1400	25	6.6	505	9.0
14	5 • 2	926	13	21	1600	91	5.5	350	5.2
15	3.2	394	3.4	14	900	34	6.0	432	7.0
16	1.9	160	.82	4.4	699	8.3	4.9	295	3.9
17	1.5	89	+36	2.9	319	2.5	4.9	295	3.9
18	1.2	56	.18	2.3	209	1.3	4.4	244	2.9
19	1.2	56	-18	7.1	176	1.0	4.0	231	2.5
50	1.2	56	.18	6.6	1400	25	4.0	231	2.5
21	1.0	37	.10	1.9	160	. 82	3,2	139	1.2
22	1.0	37	•10	1.6	102	. 44	2.9	125	.98
23	1.C	37	-10	1.8	132	.64	1.9	58	. 30
24	1.5	89	• 36	1.9	132	.64	1.6	44	.19
25	5.2	926	13	1.9	160	.82	1.6	44	.19
26	7.3	1670	33	1.6.	102	.44	2.1	71	•40
27	7.3	1670	33	1.9	160	. 82	2.3	84	•52
28	7.3	1670	33	1.9	160	.82	2.3	84	•52
29	7.3	1676	33	2.1	176	1.0	2.5	96	.66
30	6.7	1490	27	2.3	209	1.3	2.1	71	.40
31	6.7	1490	27	2.9	319	2.5			
TOTAL	161.1		3181.70	198.1		2479.52	177.5		282.16
TOTAL TOTAL	DISCHARGE FO SUSPENDED-SE	R YEAR (CE	S-DAYS1 CHARGE FOR YEA	R (TONS)					1521.14 7428.51

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

					1 70/10	00/10 EAT 11/1	, ,,,,											
			WATER								PART	ICLE S	SIZE					
			TEM-			SUSPENDED												METHOD
			PERA-		CONCEN-		PERCE	NT F	INER	THAN	THE S	IZE	IN MI	LLIME	EK21	INDI	LAIED	
			TURE			DISCHARGE												ANALY-
	DATE	TIME	( C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	•008	.016	.031	.062	.125	. 250	•200	1.00	2.00	515
APE	22. 1969	1340	24.0	7.4	384C	77	4	4		7		20	79	99	100			VPWC
	21	1230	19.0	37	10800	168C	4	5		11		24	69	93	99	100		VPWC
	17	1035	14.0	35	3990	377	8	11		23		58	92	100				VPWC
	20	2055	21.0	86	268000	62200	25	36		62		82	95	99	100			VPWC
	12	1220	23.)	4.4	939	11	14	22		46		59	89	100				VPWC
SEF	9	1130	20.0	18	25800	1250	40	55		88		95	99	100				VPWC
	10	1320	0.0	8.5	3400	78	В	9		15		41	85	99	100			VPWC
JAN	15, 1970	1445	0.0	2.7	419	3.1	6	12				41	76	99	100			VPWC
	12	1200	8.0	3.2	302	2.6	23	34				60	88	100				VPWC
MAR	10	1140	3.0	4.6	1420	18	27	37		66		73	91	100				VPWC
APE	10	2910	7.0	1.4	92	.35	18	24				74	90	100				VPWC
	14	1125	14.0	1.2	120	.39												
	12	1405	22.5	8.3	571	12												
JUL	. 8	1425	28.5	7.9	154C	33	16	19				56	95	100				VPWC
JUL	9	2025	17.0	68	82600	15200	26	29				73	97	100				VPWC
AUG	7	092.	11.0	14	4630	175	49	53				82	88	100				VPWC
SEF		1320	21.0	6.7	619	11	10	14				34	78	100				VPWC

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHOD OF ANALYSIS: H, HYDROMETER; O, UPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

		WATER	NUMBER						PAR	TICLE S	IZE					
		TEM- PERA- TURE	OF SAM- PLING	DISCHARGE						SIZE (I						METHOD OF ANALY-
DATE	TIME	( C)	PCINTS	(CFS)	.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.C	32.0	64.0	515
APR 22, 196	9 1340	24.0		7.4		7	22	32	41	44	50	60	82	100		SV
JUL 17		23.0		2.6	1	10	40	67	79	84	90	96	100			S۷
SEP 9	. 1130	20.0		18	1	6	31	54	67	70	75	82	90	100		sv
FEH 12, 197	່າ 120)	B.0		3.2	1	7	30	50	59	63	72	84	95	100		SV
MAR 10	. 1140	3.0		4.6	1	7	33	58	67	71	78	86	95	100		SV
APR 10	. 0910	7.0		1.4		3	23	42	47	50	58	71	89	100		sv
JUL 8	. 1425	28.5		7.9	ı	15	38	47	52	55	62	71	92	100		SV
AUG 7	. 0920	11.0		14		8	33	50	57	66	78	89	98	100		SV
SEP 8	. 1320	21.0		6.7		45	71	85	88	92	97	99	100			SV

#### 0933 0230 FREMONT RIVER NEAR CAINEVILLE, UTAH

LOCATION.--Lat 38°16'40", long 111°04'00", in NE NE 18 sec. 20, T.29 S., R.8 E., Wayne County, at gaging station 2 miles downstream from Pleasant Creek, 4.5 miles southwest of Caineville, and 9.8 miles east of Fruita, Utah.

DRAINAGE AREA. -- 1,190 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: March to September 1967 (miscellaneous), Water temperatures: March 1967 to September 1969, Sediment records: March 1967 to September 1970,

#### EXTREMES. -- 1969-70:

Sediment concentrations: Maximum daily, 56,000 mg/l Aug. 3; minimum daily, 24 mg/l Aug. 2. Sediment discharge: Maximum daily, 18,900 tons Aug. 4; minimum daily, 1.6 tons Aug. 12.

Water temperatures (1967-69): Maximum, 31.0°C Aug. 12, 1967; minimum, freezing point on many days during December 1967 and January 1968. Sediment concentrations: Maximum daily, 129,000 mg/l July 20, 1969; minimum daily, 11 mg/l July 23, 1968. Sediment discharge: Maximum daily, 105,000 tons Sept. 10, 1969; minimum daily, 1 ton on several days in 1967 and 1968.

DECEMBER

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		OCTORFR			NOVEMBER			DECEMPER	
DAY	MFAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHAPGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
ı	45	120	15	84	353	gn	77	240	50
è	45	90	11	84	353	80	77	240	50
3	46	89	ii	86	442	105	90	296	64
4	46	89	ii	86	442	105	94	353	80
5	46	89	11	88	442	105	84	353	80
6	46	89	11	88	442	105	79	277	59
7	47	102	13	85	392	91	83	447	105
В	47	102	13	82	325	72	80	296	64
9	47	105	13	82	325	72	RA.	442	105
10	47	102	13	В0	296	64	AH.	519	153
11	48	116	15	79	277	59	85	392	90
12	49	168	22	77	551	46	84	447	105
13	49	116	15	72	180	35	87	426	100
14	49	128	17	69	145	27	95	392	90
15	52	178	25	69	145	21	84	353	80
16	53	189	27	85	392	90	84	353	80
17	57	279	43	87	426	100	87	426	100
18	62	430	72	75	217	44	87	426	100
19	65	541	95	74	200	40	AH	442	105
50	72	489	95	79	277	54	94	630	160
21	87	426	100	75	217	44	95	694	180
22	115	1220	379	82	325	72	92	543	135
23	100	519	140	88	325	17	90	444	120
24	87	426	100	75	217	44	92	547	135
25	87	426	100	77	240	51	90	494	120
26	88	442	105	79	277	54	85	392	90
27	82	325	72	74	277	5→	75	217	44
28	85	325	72	77	240	51	65	114	20
29	85	325	72	74	200	40	65	114	50
30	84	423	96	75	217	44	64	142	26
31	85	395	90				74	200	40
TOTAL	1996		1874	2390		1939	2546		2720

MARCH

# DIRTY DEVIL RIVER BASIN

JANUARY

# 0933 0230 FREMONT RIVER NEAR CAINEVILLE, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE: WATER YEAR OCTOBER 1949 TO SEPTEMBER 1970 FEBRUARY

		JANUJART			PERRUART			мачсн	
DAY	MFAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN~ TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	65 67 72 74 71	114 133 180 200 172	20 24 35 40 33	90 88 88 98 98	494 442 442 794 794	120 105 105 210 210	96 94 94 94	694 630 630 630	180 160 160 160
6 7 8 9	71 72 72 72 72	172 180 180 180	33 35 35 35 35	100 101 101 100 101	852 953 953 852 953	230 260 230 230	92 90 92 90 87	543 494 543 494 356	135 120 135 120 84
11 12 13 14 15	80 90 100 110	296 494 852 1620 1620	64 120 230 481 481	101 103 105 105 103	953 890 1230 1230 1230	260 243 349 349 300	85 85 85 85 85	392 392 392 392	90 90 90 90 90
15 17 18 19 20	115 117 107 103 94	1930 1930 1310 1080 630	594 599 378 300 160	96 96 94 88 87	694 694 630 442 426	180 180 160 105 100	85 85 85 85	392 392 392 392	90 90 90 90 90
21 22 23 24 25	96 101 107 107 101	694 953 1310 1310 953	180 260 378 378 260	84 94 96 94 92	442 630 694 630 543	105 160 180 160 135	85 85 80 70 70	392 392 296 159 159	90 90 64 30 30
26 27 28 29 30 31	98 98 96 82 85 88	794 794 594 325 392 442	210 210 180 72 90 105	92 94 44  	543 630 630	135 160 160 	70 70 70 70 70 70	159 159 159 159 159 159	30 30 30 30 30 30
TOTAL	2791		6060	2687		5416	2583		2798
		APRIL			MAY			JUNE	
DAY	MFAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHAPGE (TONS/DAY)	MEAN UISCHARGE (CFS)	ME AN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- THATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
DAY 1 2 3 4	DISCHARGE	CONCEN- TRATION	DISCHAPGE	DISCHARGE	CONCEN- TRATION	DISCHARGE	DISCHARGE	CONCEN- THATION	DISCHARGE
1 2 3	70 70 70 65	CONCENTRATION (MG/L)  159 159 119 87	DISCHAPGE (TONS/DAY) 30 30 22 15	UISCHARGE (CFS) 51 51 40 47	CONCENTRATION (MG/L)  60 56 50 41	DISCHARGE (TONS/DAY) 8.3 7.7 6.5 5.2	DISCHARGE (CFS) 35 33 32 33	CONCEN- THATION (MG/L) 136 90 134 203	DISCHARGE (TONS/DAY) 13 8.0 12 13
1 2 3 4 5 6 7 8	70 70 70 70 65 60 60 56 61	CONCEN- TRATION (MG/L) )59 159 119 87 100 79 93 76	DISCHAPGE (TONS/DAY)  30 30 27 15 16 13 14 )1	UISCHARGE (CFS) 51 51 46 47 55 91 106 115 97	CONCENTRATION (MG/L)  60 56 50 41 600 1000 1400 150 620	DISCHARGE (TONS/DAY)  3.3 7.7 6.5 5.2 89 246 401 357	DISCHARGE (CFS) 15 33 32 33 74 36 36 35	CONCEN- TRATION (MG/L) 136 90 134 203 176 150 220 194	DISCHARGE (TONS/DAY)  13 8.0 12 19 16 15 21 18 40
1 2 3 4 5 6 7 8 9 10	DISCHAPRE (CFS)  70  70  65  60  60  56  56  41  59  75  109  69  57	CONCEN- TRATION (MG/L) ) 59 159 119 87 100 79 93 76 190 94	DISCHAPGE (TONS/DAY)  70 70 70 72 15 16 17 14 11 15 24 56 45 21	UISCHAMGE (CFS) 51 51 4d 47 55 91 106 115 97 76 68 73 64 61	CONCENTRATION (MGZL)  60 56 50 41 600 1000 1400 1150 620 356 148 163 120 91	DISCHARGE (TONS/DAY)  3.3 7.7 6.5 5.2 89 246 401 357 162 73 27 32 21	DISCHARGE (CFS)  15 13 32 13 14 34 36 35 35 33 41 18 34	CONCEN- THATION (MG/L) 136 90 134 203 176 150 220 194 419 426 432 128 140 123	DISCHARGE (TONS/DAY)  13 8.0 12 19 16 15 21 18 40 38 48 13 13
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	DISCHAPAE (CFS) 70 70 70 65 60 60 56 61 59 75 109 69 57 49 52 54 54 53	CONCENTRATION (MG/L)  159 119 87 100 79 93 76 190 94 140 140 143 107 77 72 60	DISCHAPGE (TONS/DAY)  30 30 32 15 16 13 14 11 15 24 45 45 21 19 15 10 8+6	UISCHANGE (CFS) 51 51 44 47 75 91 106 115 97 76 68 68 61 62 57 64 63 67	CONCENTRATION (MG/L)  60 50 50 41 600 1000 1400 1150 520 356 143 120 97 142 520 820 1450	DISCHARGE (TONS/DAY)  3.3 7.7 6.5 5.2 89 246 401 157 162 73 27 21 15 16 22 90 134 262	01SCHARGE (CFS) 35 32 33 34 34 35 35 35 37 41 38 34 31 32 30 30 30 30 30 30 30 30 30 30 30 30 30	CONCENTRATION (MG/L)  136 90 134 203 176 150 220 194 419 426 431 106 849 72 56 62	DISCHAPGE (TUNS/DAY)  13 8,0 12 19 16 15 21 14 40 38 48 48 13 13 11 9,2 7,2 5,8 4,4
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHAPRE (CFS)  70 70 70 65 60 60 66 65 641 59 75 100 69 57 49 52 54 54 55 55	CONCENTRATION (MG/L)  JS9 119 R7 100 79 93 76 190 94 140 140 77 77 72 60 46 37 108 34 30	DISCHAPGE (TONS/DAY)  30 30 30 32 15 16 13 14 11 15 24 545 21 19 15 10 0 7.0	UISCHANGE (CFS) 51 51 4d 47 75 91 106 115 97 76 69 73 64 61 62 57 64 63 67 60 49 44	CONCENTRATION (MG/L)  60 50 50 41 600 1000 1400 1150 520 356 143 120 97 142 520 1450 1690 1690 1690	DISCHARGE (TONS/DAY)  3.3 7.7 6.5 6.5 6.2 89 246 401 357 162 73 27 32 21 15 16 22 90 134 262 274 206 75 71 70	DISCHARGE (CFS) 35 33 32 33 34 34 35 35 35 37 41 38 39 39 41 39 39 39 39 39 39 39 39 39 39 39 39 39	CONCENTRATION (MG/L)  136 190 134 203 176 150 220 194 419 426 427 128 1403 106 89 77 562 51 96 141 108	DISCHAPGE (TONS/DAY)  13 8,0 12 19 16 15 21 18 40 38 48 13 11 19 2 7,2 5,8 4,4 4,7 4,0 9,3 14 9,9 6,8
1 2 3 4 5 6 7 7 8 9 10 11 12 7 13 14 5 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	DISCHAPAE (CFS)  77  70  65  60  66  66  66  67  67  75  109  69  57  49  52  54  53  56  65  65  65  65  67  59  57  59  59  57  59  59  59  59  5	CONCENTRATION (MG/L) 159 119 R7 100 79 93 76 190 140 140 159 143 143 107 71 72 60 46 136 148 30 36 647 108 36 667 108	DISCHAPGE (TONS/DAY)  10 10 10 22 15 16 13 14 11 15 24 56 45 21 19 15 10 8.6 7.0 66 17 5.0 4.5 5.2	UISCHANGE (CFS) 51 51 51 46 47 55 91 106 115 97 76 68 73 64 61 62 57 64 63 67 60 49 46 44 44 43 45 42 40 43 40	CONCENTRATION (MG/L)  60 50 50 41 600 1000 1400 1150 356 144 163 120 97 142 920 1450 1450 1450 1450 1560 600 297 155	DISCHARGE (TONS/DAY)  8.3 7.7 6.5 5.2 89 246 401 357 162 73 27 32 21 15 16 22 90 134 262 274 206 75 71 70 51 36 17 20 26 27 37 37 37 37 37 37 37 37 37 37 37 37 37	DISCHARGE (CFS)  35 33 34 34 35 35 35 37 41 38 34 37 37 29 29 36 37 37 34 38 38 38 38 38 38	CONCENTRATION (MG/L)  136 90 134 203 176 150 220 194 419 426 432 128 149 427 56 62 51 141 108 74 76 77 422 70 50 50	DISCHAPGE (TONS/DAY)  13 8.0 12 19 16 15 21 18 40 38 48 13 13 11 9.2 7.25 5.8 4 4.7 4.0 9.3 14 9.9 6.8 6.8 7.3 38 6.2 4.7

## 09330230 FREMONT RIVER NEAR CAINEVILLE, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE: WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JULY			<b>AUGUST</b>			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MFAN CONCEN- TPATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHAPGE (TONS/DAY)	MFAN DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	37	50	5.0	34	55	5.6	96	460	119
2	39	59	6.2	36	47	4.6	58	160	25
3	41	72	8.0	35	56000	5290	47	110	14
4	42	74	9.4	217	35500	18900	47 47	110	14
5	45	91	11	94	18000	4570	47	110	14
4	51	401	66	59	326	52	47	110	14
7	69	741	138	52	178	25	47	110	14
4	64	539	93	37	50	5.0	47	110	14
9	88	9960	2370	33	39	3.5	44	84	10
10	73	7100	1400	31	35	2.9	47	110	14
11	61	5400	889	27	27	5.0	53	189	27
12	57	3700	529	25	24	1.6	45	91	11
13	46	105	13	32	36	3.1	45	91	11
14	39	59	6.2	41	290	32	43	83	9.6
15	37	50	5.0	34	200	14	44	84	10
16	33	39	3.5	30	32	2.6	44	84	10
17	35	44	4.2	29	31	2.4	44	84	10
18	37	50	5.0	30	32	2.6	45	91	11
19	38	57	5.8	35	44	4.2	47	110	14
20	34	41	3.8	104	440	124	46	105	13
21	34	41	3.8	79	330	70	45	91	11
52	36	47	4.6	57	286	44	45	105	13
23	35	44	4.2	52	178	25	44	94	10
24	38	57	5.8	46	105	13	45	91	11
25	49	116	15	43	A 3	9.6	45	91	11
25	41	72	8.0	68	708	139	52	178	25
27	42	74	8.4	42	74	A.4	49	128	17
28	46	105	13	34	59	6.2	52	178	25
59	43	.83	9.6	39	59	5.7	56	251	38
30	43	116	15	38	107	11	54	506	30
31	43	83	9.6	41	154	17			
TUTAL	1426		5667.1	1563		24391.5	1471		569.6

TOTAL DISCHARGE FOR YEAR (CES-DAYS)
TUTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

24209 60460.8

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970
(METHODS OF ANALYSIS: B, BOTTOM HITHDRAWAL TUBE; C, CHENICALLY DISPERSED, N, IN NATIVE WATER; P, PIPET; S, SIEVE
V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PERCI			THE S		IN MI	.LIME		INDIO	 METHOD OF ANALY- SIS
OCT 9 1969	1215	9.0	48	137	18	5	7	 		29	60	99	100		 VPWC
NOV 12			78	220	46	17	27	 		62	81	99	100		 VPWC
DEC 10			89	553	133	9	13	 25		43	70	90	100		 VPWC
JAN 15 1970			11ó	2190	650	15	22	 47		72	93	100	100		 VPWC
FEB 12			103	505	140	12	17	 30		50	78	96	100		 VPWC
MAR 10			87	348	82	15	22	 		60	86	99	100		 VPWC
APR 10	1130	10.0	59	110	18	28	34	 		74	89	99	100		 VPWC
MAY 14	1320	15.0	65	95	17	28	33	 		65	86	100			 VPWC
JUL 8	1600	21.0	63	551	94	19	24	 		65	94	100			 VPWC
JUL 9	2040		204	53100	30300	35	43	 		88	100				 VPWC
AUG 4			156	48100	21000	32	36	 		88	99	100			 VPWC
AUG 7			51	2470	340	37	44	 	-	70	92	99	100		 VPWC
SEP 8			48	506	66	5	6	 		35	59	88	97	100	 VPWC

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHOD OF ANALYSIS: H, HYDROMETER; D, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

WATER NUMBER PARTICLE SIZE TEM- OF												METHOD				
		PERA- TURE	SAM- PLING	DISCHARGE		PERCEN	T FINE	R THAN	THE S	IZE (I	N MILL	IMETER	S) INE	ICATED	)	OF ANALY-
DATE	TIME	(°C)	POINTS	(CFS)	.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	SIS
NOV 12 1969			14	78		1	2	3	5	6	12	26	57	96	100	sv
JAN 15 1970			10	110		4	14	23	28	32	42	59	80	100		SV
FEB 12			22	103		2	6	10	1.2	15	21	35	61	96	100	sv
MAR 10			20	87			3	6	7	9	15	27	60	97	100	sv
APR 10			20	59		1	4	6	7	9	14	26	59	96	100	sv
MAY 14			22	65		1	3	5	6	8	13	26	54	97	100	sv
JUL 8			22	63		3	12	17	21	24	29	39	59	97	100	sv
AUG 7			19	51		2	9	16	20	23	31	42	58	76	100	SV
SEP 8			22	48		11	13	15	16	19	25	37	54	77	100	sv

# 09346000 NAVAJO RIVER AT EDITH, COLO.

LOCATION. --Lat 37°00'10", long 106°54'25", in NW¼ sec.24, T.32 N., R.1 W., Archuleta County, at gaging station 290 ft downstream from high way bridge, 0.2 mile southeast of Edith, 0.5 mile upstream from Colorado-New Mexico State line, and 1.3 miles upstream from Coyote Creek.

DRAINAGE AREA. -- 172 sq mi.

PERIOD OF RECORD, --Chemical analyses: October 1969 to September 1970, Sediment records: October 1969 to September 1970 (partial records).

REMARKS.--Bacteriological analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	Ci	HEMICAL	ANALYSES	, WATER	YEAR	OCTOBER	1969 1	O SEPTEM	ABER 1	970	
DATE	TIME	DI CHAI (CF:	S- SIL RGE (SI	VED S ICA 02)	DIS- SOLVED IRON (FE) UG/L)	DIS- SOL VE CAL- CIUM (CAI (MG/L	SOL D MA NE I SI	- 50 UM 50 IG)	DIS- DLVED DDIUM (NA) MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3)
OCT.											
14 JAN.	1200		95 2	2		28		5.8	9.2	1.7	77
12 APR.	120D		42 2	4		28		5.6	9.6	1.6	77
13	1215		77 2	1	10	30		7.0	9.9	1.0	5 B7
JUNE OB	0945	5	51 1	9		17		3.6	5.6	1.1	. 57
JULY 13	0955	1	04 2	1	20	20		4.3	6.3	1.3	3 66
DATE	CAR- 8 DNA TE (CO3) (MG/L)	150	VED CHL ATE RID 4) (CL	VED 5 D- F E	DIS- SOLVED LUO- RIDE (F)	DIS- SDL VE NITRIT (N) (MG/L	D SOL E NITR (N	VED SC ATE NIT	OIS_ OLVED RATE 103)	TOTAL PHOS- PHORUS (P) (MG/L1	(B)
0CT. 14		) 4	8	1.0	•2		-	• 00	•0		
JAN. 12		) 4	R	•8	. 2		-	•00	.0		
APR. 13		) 4		•6	• 2	• 00	1	•00	.0	.04	60
JUNE 08	,			• 2	• 3			• DO	.0		
JULY								•00	•0	.03	0
13	,	) 2	,	• 6	• 3	•00	,	•00	•0	.03	·
0	: !	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C)	DIS- SOL VED SOL IDS (SUM DE CONSTI- TUENTS) (MG/L)	HARO- NESS (CA+M (MG/	C - 80 HA G) NE	ON- AR- NATE RD- SS G/L)	SODIUM AO- SORP- TION RATIO	SPECT- FIC CONO- UCTANCI (MICRO- MHOSI	E 1		EMPER- Ature Deg C)
oc											
JA	4 N.	160	154	,	90	27	• 4		-		6.0
1 AP	2 R.	166	156	•	93	30	•4		-	8.0	0.0
1	3 NE	156	161	•	99	28	• 4	-	-		6.0
0	8 LY	94	95	:	55	8	.3		-		6.5
	3	113	111	•	66	12	. 3	16	2		12.5

# 09346000 NAVAJO RIVER AT EDITH, COLO .-- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

## FIELD AND BIOCHEMICAL DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)
OCT. 14	1200	95	220	8.3	6.0		
JAN. 12	1200	42	213	8.0	0.0		2
APR. 13 JUNE	1215	77	232	8.5	6.0		7
JUNE JUNE	0945	551	128	8.2	6.5	18.0	5
13	0955	104	175	8.0	12.5	20.0	5
DATE	TUR- BID- ITY (JTU)	DIS- SDL VED OXY GEN (MG/L)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIO- CHEM- ICAL OXY GEN DEMAND (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	I MME- DIATE COL!- FORM (COL. PER 100 ML)	STREP- TDCOCCI (COL- DNIES PER 100 ML)
OC T.	BID- ITY	SDL VED OXY GEN	ICAL OXYGEN OEMAND (LOW LEVEL)	CHEM- ICAL OXYGEN DEMAND	COLI- FORM (COL. PER	OIATE COL!- FORM (COL. PER	TDCOCCI (COL- DNIES PER
DC T. 14 JANa 12	BID- ITY	SDL VED OXY GEN (MG/L)	ICAL OXYGEN OEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXY GEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML)	TDCDCCI (COL- DNIES PER 100 ML)
OC T. 14 JAN. 12 APR.	BID- ITY (JTU)	SDL VED OXY GEN (MG/L)	ICAL OXYGEN OEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL OXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	OTATE COLI- FORM (COL- PER 100 ML)	TDCDCCI (COL- DNIES PER 100 ML)
DC T. 14 JAN. 12 APR.	BID- ITY (JTU)	SDL VED OXY GEN (MG/L) 9.5	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXY GEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	OTATE COL!- FORM (COL. PER 100 ML)	TDCDCCI (COL- DN IES PER 100 ML)

# SPECTROGRAPHIC ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY)

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	OIS- SOLVED COPPER (CU) (UG/L)	OIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SDLVED VANA- OIUM (V) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
JAN. 12	1205	<100	<4	<10	<10	<40	<20	30		13
APR.										
13 JUNE	1220	<100	<3	<10	<30	<40	<20	<20		<10
08	0950	<10		<5	<50		16		<1000	160

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS AND PARTICLE-SIZE DISTRIBUTION, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: 8, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

			WATER			********					PART	ICLE	SI ZE					METHOD	
			PERA-	DISCHARGE		SUSPENDED SEDIMENT DISCHARGE	Pt RC	NT F	INER	THAN	THE S	IZE (	IN MIL	LIME1	TERS)	INDIC			
0	DATE	TIME	( C)	(CFS)		(TONS/DAY)	.002	.004	•008	.016	.031	.062	-125	-250	. 500	1.00	2.00	SI S	
OCT 1	14, 1969	1215	6.0	95	16	4.1													
JAN 1	2. 1970	1200	0.0	42	4	.45													
APR 1	3	1215	6.0	77	55	11	53	66		87	·	92	96	98	100			SPWC	
JUN	8	1000	6.5	551	91	135													
1111 3	3	0045	12.5	104	20	7.0													

## 09346400 SAN JUAN RIVER NEAR CARRACAS, COLO.

LOCATION (revised). --Lat 37°00'43", long 107°18'34", in SE\(\frac{1}{2}\)SE\(\frac{1}{2}\) sec.17, T.32 N., R.4 W., Archuleta County, at gaging station just upstream from flow line of Navajo Reservoir, 3 miles northwest of Carracas, 7.2 miles upstream from Piedra River, and at mile 178.8.

DRAINAGE AREA .-- 1,230 sq mi, approximately.

PERIOD OF RECORD, --Chemical analyses: July 1968 to September 1970. Sediment records: October 1969 to September 1970 (partial records).

REMARKS. -- Bacteriological analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	(	CHEMI	CAL AN	IALYSES	, WATER	YEAR	OCTOE	ER 1	969 TO	SEP	TEMBE	1970			
DATE	TIMI		DIS- CHARGE (CFS)	DI SOL SIL (SI) (MG	VED SO ICA I D2) (	IS+ LVED RON FE)	SOL CA CI	UM	SOLV MAC NE- SIL (MG	/ED G- JM G)	DIS- SOLVE SODIE (NA)	- ! ED !	DIS- DLVED PO- TAS- SIUM IK)	BICA BONA (HC) ( MG)	ATE 03)
OCT. 14	1600	,	420	1	9		2	4		i <b>.</b> 9	14		1.7		В5
NOV. 17	1700	)	310	1	D		3	1	ç	.2	21		2.3		89
DEC. 09	1540		154	2				2		7.9	21		2. 2		101
JAN. 13	0845			2				4		7.3	26		3. D		102
FEB. 09	1440		135 160	1			3			3. 1	27		2.7		106
MAR. 09	1545		207	1.				4	13		30		3.3		127
APR.	1500		395	1	-	0		0	-		17		2.1		102
13 MAY			1460			_				7•7					
JUNE	1240			1				.5		9	6.		•В		60
08 JULY	1130		1510	1				D		8.4	6.		1.2		64
13	1200	)	415	1	6	D	2	2	4	• • 6	9,	.9	1.8		во
DATE	CAR- BONAT (CO3) (MG/L	E SI	DIS- SOLVEC JLFATE (SO4) (MG/L)	RID (CL	VED SO D- FL E R	IS- LVED UO- IDE F) G/L)	DI SOL NITR (MG	VED ITE	DIS SOLV NITR/ (NI (MG/	/ED NTE	DIS SOLVE NITRAT (NO3) (MG/I	D PI	TAL 105- 10RUS (P) 1G/L)	SCLY SOR( GUG.	VED DN B)
OC T. 14		0	46		1. 8	• 2				.10		.4			
NOV. 17		0	77		2.0	.2				.00		.0			
DEC. 09		0	70		2.0	.0				10		. 4			
JAN.		2	77		3. 6	.3				00		.0			
13 FEB.		0	82		3. B	.3				.00		.0			
D9 MAR.										.10		.4			
09 APR.		0	114		3.8	.3									100
13 May		D	54		1.8	• 3		•00		. OD		.0 .4	•04		
11 JUNE		D	17		• 2	• 2									
DR		0	20		•4	•2				.10		•4	.01		20
13		0	28		1.1	•3		•00	•	.00		•0	.01		20
0	ATE	DIS- SOLVI SOLIC (RES DUE / 180 (	ED 5 05 5 1- (5 AT CC	DIS- SOLVED SOLIDS SUM OF ONSTI- JENTS)	HARD- NESS (CA,MG) (MG/L)	C BO HA NE	ON- AR- NA TE RO- SS IG/L)	SO!	DIUM AD- RP- ION TIO	SPEC FICONI UCTAL (MICI MHD	C D- NCE RD-	PH (UNITS:	AT	PER- URE G C)	
0C 1	4	1	56	155	84		14		•7			_	-	9.0	
NO 1	٧. 7		00	197	114		41		•9			7.	6	5.0	
DE	C• 9•••	2	15	207	112	<u>:</u>	29		. 9			_	-	0.0	
JA 1	N. 3	2	31	224	114	,	27		1.1		339	_	-	0.0	
FE 0	B. 9		33	226	119		32		1.1			_	-	0.4	
MA O	R.		98	287	160		56		1.0			_	-	8.7	
AP	R. 3		84	181	98		14		. 7			_	_	6.6	
MA	Ý 1	_	98	90	46		0		.4			_	-	12.0	
JU	NE 8		01	99	56		4		4			_	_	11.5	
JU	L Y 3		24	123	74		8		. 5			_	_	20.0	
•		•													

# 09346400 SAN JUAN RIVER NEAR CARRACAS, COLO. -- Continued

# CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

## FIELD AND BIOCHEMICAL DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCF (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMPER~ ATURE (DEG C)	CGLGR (PLAT- INUM- CGBALT UNITS)
oct.							
14	1600	420	240	8.3	9.0		
NOV. 17 DEC.	1706	310	298		5.0		
09	1540	154	320	8.0	0.0		
JAN. 13 FEB.	0845	135		8.6	0.0		3
09 MAR.	1440	160	380	8.1	0.4		5
09 APR.	1545	207	460	8.0	8.7	9.6	5
13 MAY	1500	395	258	8.8	6.6		20
II JUNE	1240	1460	1 30	8.0	12.0	19.7	40
OA JULY	1130	1510	1 32	8.5	11.5	20.0	20
13	1200	415	200	8.5	20.0	28.5	5
NATE	TUR- BID- ITY (JTU)	DIS- SOLVEO DXYGEN (MG/L)	CHEM- ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	810- CHEM- ICAL DXYGEN DEMAND (MG/L)	FECAL COLI- FORM (COL. PER 10C ML)	IMME- DIATE COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- CNIES PER 100 ML)
	BID-	SOLVFO DXYGEN	ICAL OXYGEN DEMAND (LOW LEVEL)	CHEM~ ICAL DXYGEN OEMAND	COLI- FORM (COL. PER	DIATE COLI- FORM (COL. PER	TOCOCCI ICOL- CNIES PER
OCT. 14	BID-	SOLVFO DXYGEN	ICAL OXYGEN DEMAND (LOW LEVEL)	CHEM~ ICAL DXYGEN OEMAND	COLI- FORM (COL. PER	DIATE COLI- FORM (COL. PER	TOCOCCI ICOL- CNIES PER
OCT. 14 NOV. 17	BID- ITY (JTU)	SOLVEO DXYGEN (MG/L)	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM~ ICAL DXYGEN DEMAND (MG/L)	COLI- FORM (COL- PER 100 ML)	DIATE COLI- FORM (COL. PER 100 ML)	TOCOCCI ICOL- CNIES PER 100 ML)
OCT. 14 NOV. 17 DEC.	BID- ITY (JTU)	SOLVEO EXYGEN (MG/L)	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM~ ICAL DXYGEN OEMAND (MG/L)	COLI- FORM (COL- PER 10C ML)	DIATE COLI- FORM (COL. PER 100 ML)	TOCOCCI (COL- CNIES PER 100 ML)
OCT. 14 NOV. 17 DEC. 29 JAN. 13	6 ID- 1 IY ( JTU )	SOLVEO DXYGEN (MG/L) 9.5	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM~ ICAL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 10C ML)	DIATE COL!- FORM (COL. PER 100 ML)	TOCOCCI (COL- CNIES PER 100 ML)
OCT. 14 NOV. 17 DEC. 29 JAN. 13 FEB.	BID- ITY (JTU)	9.5 10.4	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXYGEN DEMAND (MG/L)	COLI- FARM (COL. PER 10C ML)	DIATE COL!- FORM (COL. PER 100 ML) 180 2000 <100	TOCOCCI (CDL- CNIES PER 100 ML) 20 <10
OCT. 14 NOV. 17 PEC. 29 JAN. 13 FEB. 39	BID- ITY (JTU)	9.5 10.4 11.6	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 10C ML) 10 10	DIATE COLI- FORM (COL. PER 100 ML) 180 2000 <100 800	TOCOCCI (EDL- CAIES PER 100 ML) 20 <10 <10
OCT. 14 NOV. 17 DEC. 29 JAN. 13 FEB. 29 MAR.	BID- ITY (JTU)	9.5 10.4 11.6 11.3	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 10C ML) 10 10 10 <10	DIATE COLI- FORM (COL. PER 100 ML) 180 2000 <100 800 <100	TOCOCCI (COL- CNIES PER 100 ML) 20 <10 <10 <10
OCT. 14 NOV. 17 DEC. 29 JAN. 13 FEB. 29 MAR. 09 APR. 13 MAY 11	610- 11Y (JTU)	9.5 10.4 11.6 11.3 11.2	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 10C ML) 10 10 10 410 410 410	DIATE COLI- FORM (COL- PER 100 ML) 180 2000 <100 8C0 <100	TOCOCCI (COL- CNIES PER 100 ML) 20 <10 <10 <10 <10
OCT. 14 NOV. 17 DEC. 29 JAN. 13 FEB. 59 MAR. 09 APR. 13 MAY	60G 48	9.5 10.4 11.6 11.3 11.2 9.6	ICAL IXAGE DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DAYGEN DEMAND (MG/L)	COLI- FARM (COL. PER 10C ML) 10 10 10 10 10 130 130 10 10	DIATE COLL- FORM (COL PER 100 ML)  180 2000 <100 8C0 <100 <100 <100 <100	TOCOCCI (CCCI CCCI CCCI CCCI CCCI CCCI CC

BIOCHEMICAL AND SPECTROGRAPHIC ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY)

DATE	T IME	DIS- SOLVED NITRATE (N) (MG/L)	DIS. ORTHO + HYDRD. PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SDLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/LI	DIS- SOLVED VANA- DIUM (V) (UG/L)	DIS- SDLVED ZINC (ZN) (UG/L)
DCT.	1605	<.05	•150	<100	<2	<5	10	<20	20	<10		10
14 JAN- 13	0850		•150	<100	<4	<10	<10	<40	<20	<20		14
APR. 13	1505	-14	.170	<100	<3	<10	30	<4D	<20	<20		<10
JUNE 08	1135	.06	.200	<10		<5	<50		10		<1000	35

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR DCTOBER 1969 TO SEPTEMBER 1970

1	DATE	TIME	WATER TEM PERA- TURE ( C)	OISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TDNS/DAY)
JUL	13, 1970	1230	20.0	415	38	42

# 09349800 PIEDRA RIVER NEAR ARBOLES, COLO.

LOCATION (revised).--Lat 37°05'18", long 107°23'50", in NEISW1 sec.21, T.33 N., R.5 W., Archuleta County, at gaging station 3 miles downstream from Ignacio Creek, 5.2 miles northeast of Arboles Post Office, and 8 miles upstream from mouth.

DRAINAGE AREA, -- 629 sq mi.

PERIOD OF RECORD. --Chemical analyses: July 1969 to September 1970, Sediment records: October 1969 to September 1970 (partial records).

REMARKS, --Bacteriological analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

		CHEMICAL	ANALYSES	, WATER	YEAR OC	TOBER 19	969 TO	SEPTEMBER	1970	
DA TE	TIME	DIS- CHAR( (CFS)	SE (SID	ED SOL CA IR 2) (F	S- SD VED C DN C E) (	LVED AL- IUM Gaj	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)
OCT. 14	1500	25	0 13			33	4, 5	8.9	1.1	99
NDV. 17	1340					38	5.6	11	1.7	108
DEC. 09	1730					57	7.6	20	2.5	141
J AN. 12	1600					52	6. 9	20	2.3	134
FEB. 09	1550	6	5 14			58	7.6	20	2.7	142
MAR. 09	1745	94	5 16			56	7.7	20	2.8	135
APR. 13	1630	25	5 11		220	42	6.5	8.9	2.6	116
MAY 11	1410	991	3 9	•6		22	3. 2	4.2	1.0	74
JUNE 08 JULY	1325	714	4 12			22	2.9	5.2	1.2	65
13	1330	159	12		20	34	4.4	11	2.0	91
DATE	CAR- 8 DNA T (CD3) (MG/L	E SULFAT	ED CHLD TE RIGE (CL)	ED SOL - FLU RI (F	O- SO DE NIT	IS- LVED RITE N N)	DIS- SOLVEO ITRATE (N) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SCLVED BORDN (B) (UG/L)
DC T.		0 39		_				•0		
14 NOV. 17		0 59		• 5	• 2		•00	•0		
DEC.		0 95		.9 .4	•3		.10	•3		
JAN. 12		0 90		. 4	.3		•00	•0	-	
FE 8.		0 99		.4	. 3		•00	•0		
MAR. 09		0 95		•0	.4		.00	•0		
APR. 13		0 46	1	•6	•2	•00	.00	•0	.04	120
MAY 11		0 19		. 2	. 3		.10	.4		
JUNE 08 JULY		0 20		.4	•2		.00	•0		
13		3 43	1	•7	•3	•00	•00	•0	•01	30
<i>ו</i> ם	ATE	DUE AT	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NDN- CAR- 8 ONA TE HARD- NESS (MG/L I	T IC	10 (M. D- C	PECI- FIC DND- Tance ICRO- HOS) (UI		EMPER- LTURE EG C)
DC1	4	155	150	98	17		.4			10.0
ND\ 17	7	172	186	117	28	1	.4	278	7.8	
DE( 09 JA1	•••	277	268	174	58	3	. 7			0.0
1: FE	2	262	254	160	50	)	• 7			0.0
PO MAM	9••• R•	282	275	176	60		•7			4.4
O AP	9	274	267	168	56		•7			9. 2
13 MA	3 Y	179	176	120	25		• 4			6.9
11 JUI	1 NE	105	96	69	8		•2		7•7	10.7
JUI	B	106	96	67	14		• 3			13.0
1:	3	158	156	102	22	!	• 5			21.5

# 09349800 PIEDRA RIVER NEAR ARBOLES, COLO, -- Continued

# CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

FIFID AND BIDCHEMICAL DETERMINATIONS

			- 510011211	TOME DETT	-KHINA LIUN	13	
DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMPER~ ATURE (DEG C)	COLOR (PLAT- I NUM- COBALT UNI TS)
OCT.							
NOV.	1500	250	238	8 • 4	10.0		
17 DEC.	1340	201	278				
09 JAN.	173D	133	425	8, 4	.0		
12 FEB.	1600	90	380	8, 6	•0		5
09	1550	66	470	8.1	4.4	-	5
09 APR.	1745	96	420	8.1	9.2	6.4	5
13 MAY	1630	256	262		6. 9		20
11 JUNE	1410	998	150	8.5	10.7	25.6	25
08 JULY	1325	714	140	8.3	13.0	21.0	10
13	1330	159	240	9.2	21.5	30.0	7
DAT E	TUR- 810- 17Y (JTU)	DIS- SOLVED GXYGEN (MG/L)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	8 IO- CHEM- IC AL DXY GEN DEMAND (MG/L)	FECAL COLI+ FORM (COL. PER 100 ML)	IMME- DIATE COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
	-018 Y71	SOLVED OXYGEN	ICAL OXYGEN DEMAND (LOW LEVEL)	CHEM- ICAL OXYGEN DEMANO	COLI- FORM (COL. PER	DIATE COLI- FORM (COL. PER	TOCOCCI (COL- ONIES PER
OCT. 14	-018 Y71	SOLVED OXYGEN	ICAL OXYGEN DEMAND (LOW LEVEL)	CHEM- ICAL OXYGEN DEMANO	COLI- FORM (COL. PER	DIATE COLI- FORM (COL. PER	TOCOCCI (COL- ONIES PER
OCT. 14 NOV. 17	-018 Y71	SOLVED OXYGEN (MG/L)	ICAL OXYGEN DEMAND (LOW LEVEL)	CHEM- ICAL OXYGEN DEMANO	COLI- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML)	TOCOCCI (COL- ONIES PER 100 ML)
OCT. 14 NOV. 17 DEC.	(110) (114 (114	SOLVED OXYGEN (MG/L)	ICAL OXYGEN DEMAND (LOW LEVEL)	CHEM- ICAL OXYGEN DEMANO	COLI- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL. PER 100 ML)	TOCOCCI (COL- ONIES PER 100 ML)
0CT. 14 NOV. 17 DEC. 09 JAN. 12		SOLVED GXYGEN (MG/L) 9.3 9.6	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXY GEN DEMAND (MG/L)	COLITEDRAL FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML)	TOCOCCI (COL- ONIES PER 100 ML)
OCT. 14 NOV. 17 DEC. 09 JAN. 12 FEB. 09	-018	SOLVED OXYGEN (MG/L) 9.3 9.6 11.6	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG/L)	COL1- FORM (COL. PER 100 ML)	DIATE COLI FORM (COL. PER 100 ML) <20 <100	TOCOCCI (COL- ONIES PER 100 ML) <20 <10
OCT. 14 NOV. 17 DEC. 09 JAN. 12 FEB. 09 MAR.	910- 11Y (JTU)	9.3 9.6 11.6	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXY GEN DEMAND (MG/L)	COL1- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML) <20 <100 <100	TOCOCCI (COL- ONIES PER 100 ML) <20 <10 <10
OCT. 14 NOV. 17 DEC. 09 JAN. 12 FEB. 09 MAR. 09 APR.	910- 117 (JTU)	9.3 9.6 11.6 10.3	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML)  <20 <100 <100 <100	TOCOCCI (COL- ONIES PER 100 ML) <20 <10 <10 <10
QCT. 14 NOV. 17 DEC. 09 JAN. 12 FEB. 09 MAR. 09 APR.	810- 177 (JTU)	9.3 9.6 11.6 10.3 9.7	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG/L)	COLI-FORM (COL. PER 100 ML)  <1( <16 <10 <10 <10 <10 <10	DIATE COLI- FORM (COL- PER 100 ML)  <20 <100 <100 <100 <100 <100 <100	TOCOCCI (COL- (COL- ONIES PER 100 ML)  <20 <10 <10 <10 <10 <10 <10
OCT. 14 NOV. 17 DEC. 09 JAN. 12 FEB. 09 MAR. APR. 13 MAY	8ID- ITY (JTU)	9.3 9.6 11.6 10.3 9.5	ICAL  OXYGEN  DEMAND  (LOW  (LVEL)  (MG/L)	CHEM- ICAL ICAY GEN DEMAND (MG/L)	COL1-FORM (COL. PER 100 ML)  <11 <11 <10 <10 <10 <10 <10 <10 <10 <10	DIATE COLI-FORM (COL-FORM) (COL-PER 100 ML) <20 <100 <100 <100 <100 <100 <100 <100	TOCOCCI (COL-ONIES PER 100 ML)  <220 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1

# SPECTROGRAPHIC ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY)

DATE	TIME	DIS- SDLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAG- MIUM (CD) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	OIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
OCT.	1505	<100	<b>∢</b> 2	<5	50	<20	<20	<10	12
APR. 13	1635	<100	<3	<10	230	<40	<20	<20	10

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	TEM- PERA- TUPE ( C.)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
JUL 13, 1970	1330	21.5	159	10	4.3

# 0935 2900 VALLECITO CREEK NEAR BAYFIELD, COLO. (Hydrologic bench-mark station)

LOCATION.—Lat 37°28'39", long 107°32'35", in NW1 sec.16, T.37 N., R.6 W. La Plata County, temperature recorder at gaging station 60 ft upstream from Fall Creek, 0.8 mile downstream from Bear Creek, 6.7 miles north of Vallectic Dam, and 18 miles north of Bayfield.

DRAINAGE AREA .-- 72.1 sq mi.

PERIOD OF RECORD. --Chemical analyses: October 1963 to September 1968. Water temperatures: November 1962 to September 1970. Sediment records: October 1969 to September 1970 (partial records).

EXTREMES, --1969-70:
Water temperatures: Maximum, 16.0°C July 20, 21, Aug. 2, 3, 6-10; minimum, freezing point on many days during January to April.

Period of record:
Water temperatures: Maximum, 17.0°C July 21, 1963; minimum, freezing point on many days during winter periods.

	•	TEMPE	RATURE (°	~ \ OE WA	TED WATE	VEAR OC	OBED 1040	TO SEDIE	MRE# 197	,		
DAY	OCT		NO			EC	JA		FE ASEM.			AR
UAT							-					
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.0	6.0	3.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
2	9.0	8.0	3.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
3	8.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
4 5	4.0 4.0	1.0	2.0 3.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
6 7	5.0 6.0	1.0 3.0	3.0 3.0	2.0 2.0	1.0 1.0	1.0	0.0	0.0	0.0	0.0 0.0	0.0	0.0
8	7.0	4.0	3.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
9	7.0	6.0	3.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
10	6.0	6.0	3.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
11	6.0	5.0	4.0	3.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
12	5.0	5.0	4.0	3.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
13	5.0 5.0	2 • 0 4 • 0	3.0 3.0	2.0 1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
15	5.0	4.0	2.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
16 17	5.0 5.0	4.0 4.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0 0.0	0.0
18	5.0	5.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
19	5.0	5.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
20	6.0	4.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
21	6.0	5.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
22	5.0	5.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
23	5.0	4.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
24 25	5.0 5.0	4.3 4.0	1.0 I.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
26	6.0	5.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
27 28	6.0 5.0	5.0 5.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
29	5.0	2.0	1.0	1.0	1.0	1.0	0.0	0.0			0.0	0.0
30	2.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0			0.0	0.0
31	3.0	1.0			1.0	1.0	0.0	0.0			0.0	0.0
AVG	5.4	3.8	1.9	1.2	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
0AY	APR	ı	МА	Y	J	UN	Ju	JL	A	JG	s	EP
DAY	APR MAX	MIN	MA Max	Y MEN	JI MAX	MIN	Ju	JL	AI MAX	JG MEN	S XAM	EP Min
OAY 1	APR MAX 0.0	MIN 0.0	MAX 1.0	Y MEN	MAX 6.0	MIN 3.0	JU MAX 12+0	JL MIN 7.0	AI MAX 15.0	JG MEN 13-0	S MAX	MIN 10.0
0AY 1 2	APR MAX 0.0 0.0	MIN 0.0 0.0	MAX 1.0 5.0	MIN 1.0 1.0	JI MAX 6-0 7-0	MIN 3.0 3.0	JU MAX 12.0 11.0	JL MIN 7.0 10.0	MAX 15.0 16.0	MIN 13-0 14-0	12.0 10.0	MIN 10.0 9.0
0AY 1 2 3 4	APR MAX 0.0	MIN 0.0 0.0	MAX 1.0 5.0 6.0	Y MEN	MAX 6.0	MIN 3.0 3.0 3.0	12.0 11.0 10.0	7.0 10.0 10.0	MAX 15.0 16.0 16.0	13-0 14-0 14-0 15-0	MAX 12.0	MIN 10.0 9.0 7.0
0AY 1 2 3	APR MAX 0.0 0.0	MIN 0.0 0.0	MAX 1.0 5.0	MIN 1.0 1.0 3.0	JI MAX 6-0 7-0 7-0	MIN 3.0 3.0	JU MAX 12.0 11.0	JL MIN 7.0 10.0	MAX 15.0 16.0	MIN 13-0 14-0 14-0	12.0 10.0 10.0	MIN 10.0 9.0
0AY 1 2 3 4 5	0.0 0.0 0.0 0.0 0.0	MIN 0.0 0.0 0.0 0.0 0.0	MAX  1.0 5.0 6.0 6.0 5.0	MEN 1.0 1.0 3.0 2.0 2.0	5-0 7-0 7-0 7-0 6-0	3.0 3.0 3.0 4.0 4.0	12.0 11.0 10.0 11.0	7.0 10.0 10.0 10.0	MAX 15.0 16.0 16.0 17.0	MIN  13-0 14-0 14-0 15-0	12.0 10.0 10.0 10.0 8.0	10.0 9.0 7.0 8.0
0AY 1 2 3 4	0.0 0.0 0.0 0.0 1.0	MIN 0.0 0.0 0.0 0.0 0.0	MAX 1.0 5.0 6.0 6.0	MIN 1.0 1.0 3.0 2.0 2.0	6-0 7-0 7-0 7-0	3.0 3.0 3.0 3.0	12.0 11.0 10.0 11.0 11.0	7.0 10.0 10.0 10.0 10.0	15.0 16.0 16.0 17.0	13-0 14-0 14-0 15-0 15-0	12.0 10.0 10.0 10.0	MIN 10.0 9.0 7.0 8.0
DAY  1 2 3 4 5 6 7 8 8	0.0 0.0 0.0 0.0 0.0 1.0	0.0 0.0 0.0 0.0 0.0 0.0	MAX  1.0 5.0 6.0 6.0 5.0 6.0 5.0	MIN 1.0 1.0 3.0 2.0 2.0 2.0	6.0 7.0 7.0 7.0 6.0 8.0 8.0	3.0 3.0 3.0 4.0 4.0 4.0	MAX  12.0 11.0 10.0 11.0 12.0 12.0 12.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0	MAX 15.0 16.0 16.0 17.0 17.0	13-0 14-0 14-0 15-0 15-0	12.0 10.0 10.0 10.0 8.0 8.0 8.0	MIN 10.0 9.0 7.0 8.0 8.0 7.0
0AY 1 2 3 4 5 5 6 7 8 9 9	0.0 0.0 0.0 0.0 0.0 1.0	0.0 0.0 0.0 0.0 0.0 0.0 1.0 1.0	MAX  1.0 5.0 6.0 6.0 6.0 5.0 5.0	MIN 1.0 1.0 3.0 2.0 2.0 3.0 3.0 2.0	MAX 6.0 7.0 7.0 7.0 6.0 8.0 8.0 6.0	3.0 3.0 3.0 4.0 4.0 4.0 6.0	MAX  12.0 11.0 11.0 11.0 12.0 12.0 12.0 13.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0	MAX  15.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0	13.0 14.0 14.0 15.0 15.0 14.0 15.0	12.0 10.0 10.0 10.0 8.0 8.0	10.0 9.0 7.0 8.0 8.0 7.0 6.0
0AY  1 2 3 4 5 6 7 8 9 10	MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0	MIN  0.0 0.0 0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0	MAX  1.0 5.0 6.0 6.0 6.0 6.0 5.0 7.0	MIN  1.0 1.0 3.0 2.0 2.0 3.0 2.0 3.0 3.0 2.0	MAX 6.0 7.0 7.0 7.0 6.0 8.0 8.0 6.0 6.0	3.0 3.0 3.0 3.0 4.0 4.0 4.0 6.0 6.0	12.0 11.0 10.0 11.0 12.0 12.0 12.0 13.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0	15.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0	13-0 14-0 14-0 15-0 15-0 14-0 14-0 13-0	12.0 10.0 10.0 10.0 8.0 8.0 8.0 9.0	10.0 9.0 7.0 8.0 8.0 7.0 5.0 6.0
0AY  1 2 3 4 5 6 7 8 9 10 11	0.0 0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0	0.0 0.0 0.0 0.0 0.0 0.0 1.0 1.0 1.0 2.0 2.0	MAX  1.0 5.0 6.0 6.0 5.0 6.0 5.0 7.0	MIN  1.0 1.0 2.0 2.0 2.0 3.0 2.0 3.0 3.0 4.0	6.0 7.0 7.0 7.0 6.0 8.0 8.0 6.0 6.0	3.0 3.0 3.0 4.0 4.0 6.0 6.0 6.0	12.0 11.0 10.0 11.0 11.0 12.0 12.0 13.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 9.0	15.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0	13.0 14.0 14.0 15.0 15.0 15.0 14.0 15.0 13.0	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0	10.0 9.0 7.0 8.0 8.0 5.0 6.0
0AY  1 2 3 4 5 6 7 8 9 10 11 12	MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0	MIN 0.0 0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0	MAX  1.0 5.0 6.0 6.0 5.0 6.0 5.0 7.0	MIN 1.0 1.0 3.0 2.0 2.0 2.0 2.0 2.0 4.0	6-0 7-0 7-0 7-0 6-0 8-0 8-0 6-0 6-0	3.0 3.0 3.0 4.0 4.0 4.0 6.0 6.0 6.0	12.0 11.0 10.0 11.0 11.0 12.0 12.0 13.0 13.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 9.0 9.0	MAX 15.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	13.0 14.0 14.0 15.0 15.0 14.0 13.0 13.0	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0	10.0 9.0 7.0 8.0 8.0 7.0 6.0 7.0
0AY  1 2 3 4 5 6 7 8 9 10 11	MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0	MIN 0.0 0.0 0.0 0.0 0.0 1.0 1.0 1.0 2.0 2.0 2.0 1.0	MAX  1.0 5.0 6.0 6.0 5.0 6.0 5.0 7.0	MIN  1.0 1.0 3.0 2.0 2.0 3.0 2.0 3.0 4.0 4.0 4.0 4.0	MAX 6.0 7.0 7.0 6.0 8.0 8.0 6.0 6.0 6.0 6.0 9.0	3.0 3.0 3.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0	12.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 9.0	15.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 14.0	MIN  13.0 14.0 14.0 15.0 14.0 15.0 14.0 15.0 14.0 15.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0	10.0 9.0 7.0 8.0 8.0 5.0 6.0
0AY  1 2 3 4 5 6 7 8 9 10 11 12 13	MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0	MIN 0.0 0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0	MAX  1.0 5.0 6.0 6.0 5.0 6.0 7.0 7.0 7.0	MIN 1.0 1.0 3.0 2.0 2.0 2.0 2.0 2.0 4.0	6-0 7-0 7-0 7-0 6-0 8-0 8-0 6-0 6-0	3.0 3.0 3.0 4.0 4.0 4.0 6.0 6.0 6.0	12.0 11.0 10.0 11.0 11.0 12.0 12.0 13.0 13.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 9.0 9.0	MAX 15.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0	13.0 14.0 14.0 15.0 15.0 14.0 13.0 13.0	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0	10.0 9.0 7.0 8.0 7.0 6.0 7.0
1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MIN 0.0 0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0	MAX  1.0 5.0 6.0 6.0 6.0 5.0 7.0 7.0 8.0 8.0	MIN  1.0 1.0 3.0 2.0 3.0 2.0 3.0 4.0 4.0 3.0 3.0 3.0	MAX 6.0 7.0 7.0 7.0 6.0 8.0 8.0 6.0 6.0 6.0 6.0 9.0 9.0	MIN 3.0 3.0 3.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0	12-0 11-0 10-0 11-0 11-0 11-0 12-0 12-0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 9.0 11.0 11	15.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 13.0	13.0 14.0 14.0 15.0 15.0 15.0 14.0 14.0 14.0 10.0 10.0 10.0 10.0 10	12.0 10.0 10.0 10.0 8.0 8.0 8.0 9.0 9.0	10.0 9.0 7.0 8.0 8.0 7.0 6.0 7.0
0AY  1 2 3 4 4 5 6 6 7 8 9 9 10 11 12 13 14 15 16 17	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MIN  0.0 0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 2.0	MAX 1.0 5.0 6.0 6.0 6.0 6.0 5.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	MIN 1.0 1.0 3.0 2.0 2.0 2.0 2.0 3.0 2.0 3.0 4.0 4.0 3.0	MAX  6.0 7.0 7.0 7.0 6.0 8.0 8.0 6.0 6.0 6.0 9.0 9.0	MIN 3.0 3.0 3.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 5.0	12.0 11.0 10.0 11.0 11.0 12.0 12.0 12.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 9.0 9.0 11.0 11	15.0 16.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 13.0 12.0	13-0 14-0 14-0 15-0 15-0 15-0 13-0 13-0 13-0 12-0 12-0 12-0	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0	10.0 9.0 7.0 8.0 8.0 7.0 6.0 7.0
1 2 3 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 18	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 1.0	MAX  1.0 5.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0	MIN  1.0 1.0 2.0 2.0 2.0 3.0 2.0 3.0 4.0 4.0 4.0 4.0 4.0 4.0 6.0	5.0 7.0 7.0 7.0 8.0 8.0 8.0 6.0 6.0 6.0 9.0 9.0 9.0	3.0 3.0 3.0 4.0 4.0 6.0 6.0 6.0 6.0 5.0	12.0 11.0 10.0 11.0 11.0 11.0 12.0 12.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 9.0 11.0 11	15.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 14.0 13.0 13.0 12.0 12.0	13.0 14.0 14.0 15.0 15.0 15.0 13.0 10.0 9.0 12.0 12.0 12.0 10.0	12.0 10.0 10.0 10.0 8.0 8.0 8.0 9.0 9.0	10.0 9.0 7.0 8.0 8.0 7.0 6.0 7.0
0AY  1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 19 19 19 19 19 19 19 19 19 19 19 19	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MIN  0.0 0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MAX 1.0 5.0 6.0 6.0 6.0 6.0 5.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 6.0 6.0	MIN  1.0 1.0 2.0 2.0 3.0 2.0 2.0 3.0 2.0 3.0 3.0 4.0 3.0 3.0 4.0 3.0 3.0 5.0	#AX 6-0 7-0 7-0 7-0 6-0 8-0 6-0 6-0 6-0 9-0 9-0 10-0 10-0 10-0	MIN  3.0 3.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	JUMAX  12-0 11-0 11-0 11-0 11-0 12-0 12-0 12-	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 1	AI MAX  15.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0	13-0 14-0 14-0 15-0 15-0 15-0 13-0 13-0 12-0 12-0 12-0 12-0 12-0	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0	10.0 9.0 7.0 8.0 8.0 7.0 6.0 7.0
0AY  1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	0.0 0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 1.0	MAX 1.0 5.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 6.0 8.0 8.0	MIN  1.0 1.0 2.0 2.0 3.0 2.0 2.0 3.0 4.0 3.0 4.0 3.0 4.0 4.0 5.0 4.0	5.0 7.0 7.0 7.0 8.0 8.0 8.0 6.0 6.0 6.0 9.0 9.0 9.0	MIN  3.0 3.0 3.0 4.0 4.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	JUNEAN AND AND AND AND AND AND AND AND AND A	7.0 10.0 10.0 10.0 10.0 11.0 11.0 9.0 11.0 11	15.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN  13-0 14-0 14-0 15-0 15-0 14-0 15-0 12-0 13-0 13-0 12-0 12-0 12-0 12-0 12-0 12-0 12-0 12	8.0 8.0 9.0 9.0 9.0	10.0 9.0 7.0 8.0 8.0 8.0 7.0 5.0 6.0
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MIN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0 1	MAX 1.0 5.0 6.0 6.0 6.0 5.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 1.0 1.0 2.0 2.0 2.0 3.0 2.0 3.0 4.0 4.0 4.0 4.0 5.0	8.0 6.0 7.0 7.0 6.0 8.0 6.0 6.0 6.0 9.0 9.0 9.0 10.0 10.0 11.0	JIN  3.0 3.0 3.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 5.0 5.0 5.0 5.0 7.0	12.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 9.0 11.0 11	15.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN  13.0 14.0 14.0 15.0 15.0 14.0 15.0 10.0 10.0 10.0 10.0 10.0 11.0 11	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0 9.0	MIN  10.0 9.0 7.0 8.0 7.0 5.0 7.0
0AY  1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MIN  0.0 0.0 0.0 0.0 0.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MAX 1.0 5.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0 8.0 7.0 8.0 8.0 8.0 7.0 8.0	MIN  1.0 2.0 2.0 3.0 2.0 3.0 2.0 3.0 3.0 4.0 3.0 3.0 4.0 4.0 4.0 4.0 5.0 4.0	#AX 6-0 7-0 7-0 7-0 6-0 8-0 8-0 8-0 6-0 6-0 9-0 9-0 10-0 11-0 10-0 10-0 9-0	MIN  3.0 3.0 3.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 5.0 5.0 5.0 5.0 5.0 7.0	JUMAX  12-0 11-0 11-0 11-0 11-0 12-0 12-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 1	AI MAX  15.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN  13-0 14-0 14-0 15-0 15-0 14-0 15-0 12-0 13-0 13-0 12-0 12-0 12-0 12-0 12-0 12-0 12-0 12	\$12.0 10.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0 9.0	MIN 10.0 9.0 7.0 8.0 6.0 7.0
0AY  1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 16 17 18 19 20 21 22 23 24	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MIN  0.0 0.0 0.0 0.0 0.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	MAX 1.0 5.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 7.0 8.0 8.0 7.0 7.0 8.0 8.0	MIN 1.0 1.0 2.0 2.0 2.0 3.0 2.0 3.0 4.0 4.0 4.0 4.0 5.0	8.0 6.0 7.0 7.0 6.0 8.0 6.0 6.0 6.0 9.0 9.0 9.0 10.0 10.0 11.0	JIN  3.0 3.0 3.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 5.0 5.0 5.0 5.0 7.0	12.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 9.0 11.0 11	15.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0	MIN  13.0 14.0 14.0 15.0 15.0 14.0 15.0 10.0 10.0 10.0 10.0 10.0 11.0 11	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0 9.0	MIN 10.0 9.0 7.0 8.0 8.0 7.0 6.0 7.0
1 2 3 4 5 6 6 7 8 9 10 11 12 2 13 14 4 15 16 17 18 19 20 21 22 23	APR MAX 0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	0.0 0.0 0.0 0.0 0.0 0.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 2.0 2.0 2.0	MAX 1.0 5.0 6.0 6.0 6.0 5.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0	MIN  1.0 3.0 2.0 2.0 3.0 2.0 3.0 2.0 3.0 4.0 3.0 3.0 4.0 4.0 5.0 5.0 3.0	MAX 6.0 7.0 7.0 7.0 6.0 8.0 8.0 6.0 6.0 8.0 9.0 9.0 10.0 10.0 10.0 11.0 11.0	JIN  3.0 3.0 3.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0	12-0 11-0 11-0 11-0 11-0 11-0 12-0 12-0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 1	15.0 16.0 16.0 17.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN  13.0 14.0 14.0 15.0 15.0 14.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0 	MIN  10.00 9.00 7.00 8.07 7.00 5.00 7.00 8.00 7.00 8.00 7.00 8.00 7.00 8.00 9.00 9.00 9.00 9.00 9.00 9.00 9
0AY  1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MIN  0.0 0.0 0.0 0.0 0.0 0.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	MAX 1.0 5.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0	MIN  1.0 2.0 2.0 3.0 2.0 2.0 3.0 2.0 3.0 4.0 3.0 3.0 4.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3	MAX 6.0 7.0 7.0 7.0 7.0 6.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 10.0 11.0 10.0 11.0 12.0 13.0	MIN  3.0 3.0 3.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 7.0 8.0	JUL MAX  12-0 11-0 11-0 11-0 12-0 12-0 12-0 13-0 13-0 13-0 13-0 13-0 15-0 15-0 15-0 15-0 16-0 16-0 16-0 16-0 16-0 16-0 16-0 16	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 1	15.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN  13-0 14-0 14-0 15-0 15-0 14-0 15-0 14-0 15-0 12-0 13-0 12-0 12-0 12-0 12-0 12-0 12-0 12-0 12	\$12.0 10.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 10.0 9.0 7.0 8.0 8.0 7.0 6.0 7.0
0AY  1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MIN  0.0 0.0 0.0 0.0 0.0 0.0 1.0 1.0 1.0 2.0 2.0 1.0 1.0 1.0 1.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MAX  1.0 5.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 8.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN  1.0 3.0 2.0 2.0 3.0 2.0 3.0 2.0 3.0 4.0 4.0 4.0 4.0 5.0 4.0 5.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 6.0 7.0 7.0 7.0 7.0 6.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 10.0 10.0 11.0 11.0 12.0 12.0 13.0	MIN  3.0 3.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 7.0 8.0 8.0	JUL MAX  12-0 11-0 11-0 11-0 12-0 12-0 12-0 13-0 13-0 13-0 13-0 13-0 13-0 13-0 13	MIN  7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0	15.0 16.0 16.0 17.0 16.0 17.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN  13-0 14-0 14-0 15-0 15-0 14-0 15-0 14-0 15-0 12-0 13-0 12-0 12-0 12-0 12-0 12-0 12-0 12-0 12	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0 	MIN 10.0 7.0 8.0 8.0 7.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7
0AY  1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 4 15 15 16 17 18 19 20 21 22 3 24 25 26 27 28	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0 1.0	MAX 1.0 5.0 6.0 6.0 6.0 5.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0	MIN  1.0 3.0 2.0 3.0 2.0 3.0 2.0 3.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 6.0 7.0 7.0 7.0 6.0 8.0 8.0 6.0 6.0 6.0 8.0 10.0 10.0 11.0 12.0 12.0 13.0	JIN  3.0 3.0 3.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 10.0	12-0 11-0 11-0 11-0 11-0 11-0 12-0 12-0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 1	15.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN  13.0 14.0 14.0 15.0 15.0 14.0 13.0 12.0 13.0 13.0 13.0 13.0 10.0 10.0 10.0 10	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0 	MIN 10.0 9.0 7.0 8.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7
0AY  1 2 3 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 12 20 21 12 22 23 24 25 26 27 28 29 29	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MIN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	MAX 1.0 5.0 6.0 6.0 5.0 6.0 5.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0 8.0 7.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	4.00 3.00 2.00 2.00 2.00 2.00 3.00 2.00 3.00 4.00 3.00 4.00 3.00 4.00 3.00 3	MAX  6.0 7.0 7.0 6.0 8.0 8.0 6.0 6.0 6.0 6.0 10.0 11.0 11.0 12.0 12.0 13.0 14.0 13.0	JIN  3.0 3.0 3.0 3.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0 5.0 7.0 8.0 8.0 8.0 8.0	12.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 1	15.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	13.0 14.0 14.0 15.0 15.0 15.0 15.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 11.0 10.0 11.0 10.0 11.0 10.0 10	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0 	MIN 10.0 9.0 7.0 8.0 5.0 6.C 7
0AY  1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 4 15 15 16 17 18 19 20 21 22 3 24 25 26 27 28	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0 1.0	MAX 1.0 5.0 6.0 6.0 6.0 5.0 7.0 7.0 7.0 8.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0	MIN  1.0 3.0 2.0 3.0 2.0 3.0 2.0 3.0 4.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	MAX 6.0 7.0 7.0 7.0 6.0 8.0 8.0 6.0 6.0 6.0 8.0 10.0 10.0 11.0 12.0 12.0 13.0	JIN  3.0 3.0 3.0 4.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 7.0 7.0 7.0 8.0 8.0 8.0 10.0	12-0 11-0 11-0 11-0 11-0 11-0 12-0 12-0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 1	15.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN  13.0 14.0 14.0 15.0 15.0 14.0 13.0 12.0 13.0 13.0 13.0 13.0 10.0 10.0 10.0 10	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0 	MIN 10.0 9.0 7.0 8.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7
1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 4 15 15 16 17 18 19 20 21 22 3 24 25 26 27 28 29 30	APR MAX  0.0 0.0 0.0 0.0 1.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2	MIN  0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	MAX 1.0 5.0 6.0 6.0 5.0 6.0 5.0 7.0 7.0 8.0 8.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 7.0	4.00 3.00 2.00 2.00 2.00 3.00 2.00 3.00 3	MAX  6.0 7.0 7.0 6.0 8.0 8.0 6.0 6.0 6.0 6.0 10.0 11.0 11.0 12.0 12.0 13.0 14.0 13.0	JIN  3.0 3.0 3.0 3.0 4.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 7.0 5.0 7.0 8.0 8.0 8.0 8.0	12-0 11-0 11-0 11-0 11-0 11-0 12-0 12-0	7.0 10.0 10.0 10.0 10.0 11.0 11.0 11.0 9.0 11.0 11	15.0 16.0 16.0 17.0 17.0 16.0 16.0 16.0 16.0 16.0 16.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	MIN  13.0 14.0 14.0 15.0 15.0 14.0 13.0 12.0 13.0 13.0 10.0 10.0 10.0 10.0 10.0 10	12.0 10.0 10.0 10.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 10.0 9.0 7.0 8.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7

# 09352900 VALLECITO CREEK NEAR BAYFIELD, COLO .-- Continued

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DED
NT
RGF
DAY)
5.7
9
4
1.8
6.7
3.1
-19
-50

#### 09354500 LOS PINOS RIVER AT LA BOCA, COLO.

LOCATION (revised).--Lat 37°00'37", long 107°35'49", in S½ sec.15, T.32 N., R.7 W., La Plata County, at gaging station at the Denver and Rio Grande Western Railroad Co. bridge at southeast edge of La Boca, 0.1 mile upstream from Spring Creek and 13 miles upstream from mouth.

DRAINAGE AREA .-- 510 sq mi, approximately.

PERIOD OF RECORD, --Chemical analyses: July 1969 to September 1970, Sediment records: October 1969 to September 1970 (partial records).

REMARKS, -- Bacteriological analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOL VED SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS~ SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)
DCT.									
15 NOV.	0845	441	4.6		20	2.9	5.3	•5	76
18	1120	258	12		22	3.8	7.9	1.2	86
DEC.									
09 JAN.	1350	175	5.8		23	3.8	8.7	• 9	94
13	1130	120	5. 3		28	4.7	13	1.1	122
FE8. 09	1235	60	3.1		30	5.0	14	1.0	132
MAR.	-					_	_	•••	
09 APR.	1340	63	3.7		34	5.9	19	1.4	142
14	0820	92	4.6	0	34	5. 8	11	1.4	130
MAY 11	1005	88	5. 4		29	5.1	17	2.1	123
JUNE			76.4		27	701	4.	2.1	123
UB JULY	1415	345	6.7		28	4.5	12	2.4	115
13	1430	159	8.1	10	30	4. 9	12	2.8	130
			DIS-	015-					
		DI S-	SOLVED	SOLVED	015-	015-	DIS_	TOTAL	-2 1G
	CAR-	SOLVED	CHL 0-	FLUO-	SOLVED	SOLVED	SOLVED	PHOS -	SCLVED
	BONATE	SULFATE	RIDE	RIDE	NITRITE	NITRATE	NI TRATE	PHOR US	BORUN
	(CO3)	(504)	(CL)	(F)	(N)	(N)	(NO3)	(P)	(8)
DATE	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(UG/L)
OCT.									
15	0	11	• 9	.3		•00	•0		
NOV. 18	D	14		•		.10	.4		
DEC.	U	1.4	1.6	• 3		•10	••		
09	0	14	.4	• 2		.10	•4		
JAN.	0	• •		_					
13 FEB.	0	18	1.8	• 3		•10	•4		
D9	0	18	2.6	.3		.00	•0		
MAR.									
09 APR.	0	26	4.0	• 3		• 05	• 2		
14			1. 9	. 3	• 00	• 00	•0	.01	80
	0	F8	1. 9						
MAY	-					. 30	1.3		
MAY 11 JUNE	0	~ <b>1:9</b> 24	4.1	.4		• 30	1.3		
MAY 11 JUNE 08	-					•30 •20	1.3		
MAY 11 JUNE	0	24	4.1	.4					  20

09354500 LOS PINOS RIVER AT LA BOCA, COLO.--Continued CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOL VED SOL IDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.								
15	во	83	58	0	• 3	140		9.5
NOV.								
18	90	105	71	0	.4		7.7	2 • D
DEC.	105	100		0				
09 JAN.	105	103	73	U	• 4			2.0
13	136	133	89	0	.6			0.0
FEB.		•••	٠,	•	••			•••
09	144	139	97	0	.6			5.0
MAR.								
09	165	164	106	0	• B			7.8
APR.								
14	138	142	100	0	• 5		7.8	5.7
MAY 11	156	149		0				10.8
JUNE	1 20	149	92	U	•B			10.0
08	140	133	85	0	.6		7.7	14.5
JULY		•	0,5	•	••			2400
13	144	139	94	0	. 5			24.5

FIELD AND BIOCHEMICAL DETERMINATIONS

			SPECI- FIC				COLOR
	TIME	DIS- CHARGE	COND- UCTANCE (MICRD-	PH	TEMPER- ATURE	AIR TEMPER- ATURE	(PLAT~ I NUM~ COBALT
DATE		(CFS)	MHO S }	(UNITS)	(DEG C)	(DEG C)	UNITSI
15 NDV.	0845	441		7.9	9.5		
18 DEC.	1120	258	159		2.0		
09 JAN.	1350	175	184	8.4	2.0		
13	1130	120	205	8.5	0.0		3
FEB. 09	1235	60	255	8.5	5.0		D
MAR. 09	1340	63	315	8.3	7. 8	10.9	5
APR. 14	0820	92	223		5.7		10
MAY 11	1 005	88	249	8.4	10.6	15.4	50
30NE 08	1415	345	218		14.5	16.0	30
JUL Y 13	1430	259	215	8. 7	24. 5	28.5	25
DATE	TUR- BID- ITY (JTU)	DIS- SOLVED OXYGEN (MG/L)	CHEM- ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	BID- CHEM- IC AL DXYGEN DEMAND (MG/L)	FECAL COLI- FORM (COL- PER 100 ML)	IMME- DIATE COLI- FORM (COL- PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
вст.	BID- ITY	SOL VED DXY GEN (MG/L)	ICAL DXYGEN DEMAND (LOW LEVEL)	CHEM- ICAL DXYGEN DEMAND	COLI- FORM (COL. PER 100 ML)	COLI- FORM (COL- PER	TOCOCCI (COL- ONIES PER
0CT. 15 NOV.	BID- ITY (JTU)	SOL VED OXYGEN	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER	OTATE COLI- FORM (COL- PER 100 ML)	TOCOCCI (COL- ONIES PER 100 ML)
0CT. 15 NOV. 18 DEC.	BID- ITY (JTU)	SOL VED DXY GEN (MG/L) 9.0	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	OTATE COLI- FORM (COL- PER 100 ML)	TOCOCCI (COL- ONIES PER 100 ML)
0CT. 15 NOV. 18	81D- 1TY (JTU)	SOL VED DXY GEN (MG/L)	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG/L)	COLI- FORM (COL- PER 100 ML) 20	OTATE COLI- FORM (COL- PER 100 ML) 360 <100	TOCOCCI (COL- ONIES PER 100 ML) 20
0CT. 15 NOV. 18 DEC. 09 JAN. 13 FEB.	81D- 1TY (JTU)	9.0 11.7	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML) 20 20 <10	01ATE COLIT- FORM (COL- PER 100 ML) 360 <100	TOCOCCI (CDL- ONIES PER 100 ML) 20 <10
OCT. 15 NOV. 18 DEC. 09 JAN. 13 FEB. 09 MAR.	8ID- ITY (JTU)	9.0 11.7 11.8	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML) 2D 20 <10	01ATE COLI- FORM (COL- PER 100 ML) 360 <100 200	TOCOCCI (CDL- ONIES PER 100 ML) 20 <10 <10
OCT. 15 NDV. 18 DEC. 09 JAN. 13 FEB. 09 MAR. D9	81D- 11Y (JTU)	9.0 11.7 11.4 11.8	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	IC AL IC AL IX YGEN DEMAND (MG / L)	COLI- FORM (COL. PER 100 ML) 20 20 <10 <10	OIATE COLI- FORM (COL- PER 100 ML) 360 <100 200 300 <100	TOCOCCI (CDL- ONIES PER 100 ML) 20 <10 <10
OCT. 15 NDV. 18 DEC. 09 JAN. 13 FEB. 09 MAR. D9 APR. 14 MAY	81D- 11Y (JTU)	9.0 11.7 11.4 11.8 11.5	ICAL DXYGAND DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML) 20 20 <10 <10	OIATE COLLI- FORM (COL- PER 100 ML) 360 <100 200 300 <100 <100	TOCOCCI (COL- OMIES PER 100 ML) 20 <10 <10 <10
OCT. 15 NDV. 15 DEC. 09 JAN. 13 FEB. 09 MAR. 09 MAY 11 JUNE 08	810- 11Y (JTU)	9.0 11.7 11.4 11.8 11.5 9.6	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG / L)	COLI- FORM (COL. PER 100 ML) 20 20 <10 <10 10	01ATE COL I- FORM (COL PER 100 ML)  360 <100 200 300 <100 <100 <100 <100	TOCOCCI (COL- OMIES PER 100 ML) 20 <10 <10 <10 10 200
OCT. 15 NOV. 18 OP JAN. 13 FEB. OP MAR. OP APR. 14 MAY 11 JUNE	61D- 1TY (JTU)	SOL VED DXYGEN (MG/L) 9.0 11.7 11.4 11.8 11.5 9.6 10.3 8.7	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DEMAND (MG /L)	COLI- FORM (COL.) PER 100 ML) 20 <10 <10 <10 <10 <10 <10 <450	OIATE COLI- FORM (COL- PER 100 ML)  360 <100 200 300 <100 <100 <100 900	TOCOCCI (COL- ONIES PER 100 ML) 20 <10 <10 <10 200 200

#### 09354500 LOS PINOS RIVER AT LA BOCA, COLO. -- Continued

SPECTROGRAPHIC ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970
(FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY)

DATE	TIME	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SDLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SDLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
DCT.									
15 APR.	0850	<100	<2	<5	20	<5D	<20	<10	6
14	0825	<100	<3	<10	50	<40	40	<20	10

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		WATER			
		TEM-			SUSPENDED
		PERA-		CONCEN-	SEDIMENT
		TURE	DISCHARGE	TRATION	DISCHARGE
OATE	TIME	( C)	(CFS)	(MG/L)	(TONS/DAY)
JUL 13, 1970	1430	24.5	159	79	34

# 0935 5500 SAN JUAN RIVER NEAR ARCHULETA, N. MEX. (Irrigation network station)

LOCATION (revised).--Lat 36°48'05", long 107°41'51", in N½ sec.20, T.30 N., R.8 W., San Juan County, at gaging station 0.5 mile upstream from Gobernador Canyon, 0.8 mile northeast of Archuleta, 7.2 miles downstream from Navajo Dam, and at river mile 136.8.

#### DRAINAGE AREA. -- 3,260 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: December 1954 to December 1968 (daily), January to September 1970 (monthly). Water temperatures: December 1954 to January 1969, Sediment records: December 1954 to September 1965.

EXTREMES.--1954-68:
Dissolved solids (1956-68): Maximum, 472 mg/l Jan. 5, 1960; minimum, 85 mg/l June 14 to July 11, 1957.
Hardness (1956-68): Maximum, 250 mg/l Sept. 19, 1961; minimum, 40 mg/l July 1-11, 1957.
Specific conductance: Maximum daily, 685 micromhos Jan. 5, 1960; minimum daily, 101 micromhos July 2, 1957.
Water temperatures: Maximum, 26.0°C Aug. 19, 1955; minimum, freezing point on many days during winter periods.

REMARKS.--Bacteriological analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SI 02) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS PDTAS- SIUM (MG/L)	0IS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCG3) (MG/L)
OCT.										
15	1040	1700	15		29	6.9		7.6		86
18	1300	1100								
DEC.										
09 JAN.	1215	1430	13		28	5.0	13		1.9	87
13	1320	434	11	20	28	4.6	14		1.5	87
FEB.	1310	434								
09	1030	2020	11	0	25	4.4	11		1.6	92
MAR.				_					1.8	91
09 APR.	1110	1998	12	0	29	5. 0	12		1.0	91
14	1000	374	12	Q	30	5.3	14		1.8	92
MAY	•	5, ,		-						
11	0730	486	10	10	30	5.0	14		1.5	93
JUNE				_			18		1.7	92
O8 JULY	1545	504	10	0	32	5.2	10		1.	72
13	1600	496	11	0	29	5. 0	13		1.8	91
AUG.		.,,		-						
11	1200	512	11	10	30	5.2	13		1.8	91
SE P.	1520	207	12	10	29	5.1	13		1.7	76
09	1530	897		10	24	3.1	7.3		1	•

# 09355500 SAN JUAN RIVER NEAR ARCHULETA, N. MEX.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

			0.00						
		01 S-	DIS- SOL VED	DIS- SCLVED	-210	-210	_210	TOTAL	015-
	CAR→	SOLVED	CHLO-	FLUO-	SOLVED	SOLVED	SOLVED	PHOS-	SCLVED
	BONATE	SULFATE	RICE	RIDE	NITRITE	NITRATE	NITRATE	PHORUS	BOR ON
	(03)	(\$04)	(CL)	(F)	(N)	(N)	(NO3)	(P)	(8)
DATE	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(UG/L)
OC T.	_			_					
15 NOV.	0	42	1.6	• 2		•1D	.4	•00	
16 DEC.			2.0					•00	
09 J AN.	0	39	2.1	•1	-	.20	•9	.00	
13	3	43	1.4	•5		• 00	.0	• 01	70
FEB. 09 MAR.	D	35	1. 3	• 2		.00	•0	•05	60
09	0	38	1.6	. 2		•10	.4	.01	110
APR. 14	0	46	1.7	•2	•00	.00	.0	•05	80
MAY 11	0	45	2.2	• 3		.00	•0	•02	30
JUNE 08	0	54	3.0	. 3		.10	.4	•00	0
JULY 13	0	43	2.0	.3	•00	•00	•0	.01	10
AUG. 11	0	45	3.5	.3		.00	.0	-01	100
S EP . 09	7	45	2.3	•4		•00	•0	• 02	50
	D1 S-	D1 S-							
	SOLVED	SOLVED		NON-	SODIUM	SPECI-			
	SOLVED	SOLVED	HARD-	CAR-	AD-	FIC			
	SOLVED SOLIDS (RESI-	SOLVED SOLIDS (SUM OF	HARD- NESS	CAR- BONATE	AD- SORP-	FIC COND-	PH	TEMP-	
	SOLVED SOLIDS (RESI- DUE AT 180 C)	SOLVED	NESS (CA,MG)	CAR- BONATE HARO- NESS	AD-	FIC COND- UCTANCE (MICRO-		ERATURE	
DATE	SOLVED SOLIDS (RESI- DUE AT	SOLVED SOLIDS (SUM OF CONSTI-	NESS	CAR- BONATE HARD-	AD- SORP- TION	FIC COND- UCTANCE	PH (UNITS)		
OCT.	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNI TS)	(DEG C)	
OCT. 15	SOLVED SOLIDS (RESI- DUE AT 180 C)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- BONATE HARO- NESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO-		ERATURE	
0CT. 15 NOV. 18	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	7.6	10.0 10.0	
OCT. 15 NOV. 18 DEC.	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	NESS (CA.MG) (MG/L)	CAR- BONATE HARO- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 7.6	10.0 10.0 8.5	
OCT 15 NDV 18 DEC 09 JAN	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIOS (SUM OF CONSTI- TUENTS) (MG/L)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	7.6	10.0 10.0	
OCT. 15 NOV. 18 DEC. 09 JAN. 13 FEB.	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	NESS (CA.MG) (MG/L) 101  88	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 228 229	7.6  7.8	10.0 10.0 8.5	
OCT. 15 NOV. 18 DEC. 09 JAN. 13 FEB. D9	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 142  146 150	NESS (CA.MG) (MG/L) 101  88 88	CAR- BONATE HARO- NESS (MG/L) 30  16	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 228 229 241	7.6  7.8 8.4	10.0 10.0 10.0 8.5 6.0 5.0	
OCT. 15 NOV. 18 DEC. 09 JAN. 13 FEB. D9 MAR. 09	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOL VED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 142  146 150	NESS (CA.MG) (MG/L)  101 88 88 88	CAR-BONATE HARD-NESS (MG/L)  30 16 12	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)  228 229 241	7.6  7.8 8.4	10.0 10.0 8.5 6.0	
OCT. 15 NOV. 18 DEC. 09 JAN. 13 FEB. 09 MAR. 09 APR.	SOL YED SOL IDS (RESIS- DUE AT 180 C) (MG/L) 	SOL VED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 142  146 150 135	NESS (CA, MG) (MG/L)  101 88 88 88	CAR-BUNATE HARD-NESS (MG/L)  30 16 12	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)  228 229 241	7.6  7.8 8.4	10.0 10.0 10.0 8.5 6.0 5.0	
OCT. 15 NOV. 18 DEC. 09 JAN. 13 FEB. D9 MAR. 09 APR. 14 JUNE 08	SOL VED SOL IDS (RESI- OUE AT 180 C) (MG/L)  154 152 141 147 158	SOL VED SOL IOS (SUM OF CONST I-TUENTS) (MG/L)  142 146 150 135 145	NESS (CA,MG) (MG/L) 101 88 88 88 85	CAR- BONATE BONATE HARO- NESS (MG/L) 30  16 12 10 12	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 228 229 241	7.6  7.8 8.4 	10.0 10.0 10.0 8.5 6.0 5.0 6.0	
OCT	SOL YED SOL TOS (RESI- OUE AT 180 C) (MG/L)  154 152 141 147 158 172	SOL VED SOL 10S ( SUM OF CONST I - TUENTS ) (MG/L ) 142 146 150 135 145 156 154	NESS (CA,MG) (MG/L) 101 88 88 85 86 94	CAR- BONATE HARO- NESS (MG/L) 30  16 12 10 12 18	**************************************	FIC COND- COND- UCTANCE (MICRO- MHOS)  228  229  241	7.6  7.8 8.4   7.7	10.0 10.0 10.0 8.5 6.0 5.0 6.0	
OCT	SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	SOL VED SOL 10S (SUM OF CONSTIRMING OF CO	NESS (CA.MG/L)  101 88 88 85 66 94 92	CAR- BONATE HARO- NESS (MG/L) 30 16 12 10 12 18 16	AD- SORP- TION RATIO -3 -3 	FILCOND- COND- UCTANCE (MICRO- MHOS)  228  229  241	7.6  7.8 8.4   7.7	ERATURE (DEG C)  10.0  10.0  8.5  6.0  5.0  6.3  5.8  11.0	

# 09355500 SAN JUAN RIVER NEAR ARCHULETA, N. MEX.--Continued CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

FIELD AND BIOCHEMICAL DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI - FIC COND UCTANCE (MICRO MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)
JAN.							_
13 FEB.	1320	434	218	9.5	6 <b>.</b> D		5
09 Mar.	1030	2020	238	7. 8	5.0		5
09 APR.	1110	1998	220	8.3	6.0	9.2	10
14,	1000	374	232		6.3		3
MAY 11 June	0730	486	240	8. 2	5. 8	16.6	10
08 JULY	1545	504	238		11.0	15.0	4
13 AUG.	1600	496	255	9.0	14.0	26.5	5
11 SEP.	1200	512	2 58	8.4	12.0	24.0	5
09	1530	897		8.7	13.0	28.5	7
DATE	TUR- BID- ITY (JTU)	DI S- SOLVED OXYGEN (MG/L)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	8 I D CHEM- IC AL DXYGEN DEMAND (MG/L)	FECAL COLI- FORM (COL- PER 100 ML)	IMME- OIATE COLI- FORM (COL- PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
JAN. 13				_			
FEB.		12.9	10	.8	<10	<100	<10
09 MAR.		11.7	6	1.8	<10	<1 00	<10
09 APR.	15	12.7			<10	<100	<10
14 MAY	11	10.4	8	•9	<10	<100	<10
11	5	9.5		•9	20	400	<10
08	5	10.3	4	. 8	<10	3 00	90
13 AUG.	4	10.6	2	1.4	<10	<100	<10
11 SEP.	3	9.9	8	.8	<10	<100	<10
09							
U74 8 8	10	11.4	13	•7	<10	<100	20

# 09357300 SAN JUAN RIVER ABOVE ANIMAS RIVER, AT FARMINGTON, N. MEX.

LOCATION. -- Lat 36°43'10", long 108°12'45", in NEJSEJNEJ sec. 20, T.29 N., R.13 W., San Juan County, 100 ft upstream from mouth of Animas River at south edge of Farmington and at river mile 99.

DRAINAGE AREA. -- 5,800 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: March 1963 to September 1970.

REMARKS, --Discharges are estimated from the streamflow records of the San Juan River at Farmington (station 09365000) and Animas River at Farmington (station 09364500), Bound Animas River at Farmington (station 09364500), Boundary of Samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SDLVED SILICA (SIG2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	OIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIOE (CL) (MG/L)
OCT . 16	1245	1624	12	100	35	7.4	22	2.0	104	0	78	2.6
NOV.		1470										
18 DEC.	1455		14	120	38	7.3	25	2.0	108	0	84	2.0
11 FEB.	0740	1240	14	220	42	2.4	25	2.0	103	0	83	2• 2
10	1840	2110	11	0	32	5. 0	19	1.8	92	0	62	2.0
10 APR,	1230	1610	11		36	4.9	23		92	2	74	1.8
15 MAY	0645	658	12	20	52	6.9	43	2.2	119	0	142	1.8
13 JUNE	0810	530	9.9		57	7.5	50		122	0	169	2.5
10	0910	530	9.9		65	6.8	51		123	3	181	3.6
JUL Y 15	1000	282	11		56	8.4	43		128	0	153	3. 2
AUG. 12	1010	388	12		56	7.4	44		126	0	157	3.1
S EP . 08	1430	1400	12		60	6.7	55		130	0	177	3.9
DATE	DIS- SOLVED FLUD- RIDE (F) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	DIS_ SOL VED NITRATE (NO3) (MG/L)	DIS- SDL VED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BDNATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
0CT. 16	SOLVED FLUD- RIDE (F)	SOL VED NITRATE (N)	SOL VED NITRATE (NO3)	SDL VED BORON (B)	SOLVED SOLIDS (RESI- DUE AT 180 C)	SOL VED SOL I DS (SUM OF CONSTI- TUENTS)	NESS (CA,MG)	CAR- BDNATE HARD- NESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO-		ATURE
0CT. 16 NOV. 18	SOLVED FLUD- RIDE (F) (MG/L)	SOLVED NITRATE (N) (MG/L)	SOL VED NITRATE (NO3) (MG/L)	SDL VED BORON (B) (UG/L)	SOL VED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	NESS (CA,MG) (MG/L)	CAR- BDNATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
OCT. 16 NOV. 18 DEC.	SOLVED FLUD- RIDE (F) (MG/L)	SOL VED NITRATE (N) (MG/L)	SOL VED NITRATE (NO3) (MG/L)	SDL VED BDRON (B) (UG/L)	SOL VED SOLIDS (RESI- OUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	NESS (CA,MG) (MG/L)	CAR- BDNATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	7.7 7.2	10.0 6.0
0CT. 16 NOV. 18 DEC. 11	SOLVED FLUD- RIDE (F) (MG/L)	SOL VED NITRATE (N) (MG/L) .00 .20	SOL VED NITRATE (NO3) (MG/L)	SDL VED BDRON (B) (UG/L) 30 60	SOL VED SOL IDS (RESI- DUE AT 180 C) (MG/L) 228 257	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 211 227 223	NESS (CA,MG) (MG/L) 11B 125	CAR- BDNATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 331 347	7.7 7.2 7.7	10.0 6.0 3.0
OCT. 16 NOV. 18 DEC. 11 FEB. 10	SOLVED FLUD- RIOE (F) (MG/L)	SOL VED NITRATE (NI) (MG/L) .00 .20 .20	SOL VED NITRATE (NO3) (MG/L)	SDL VED BORON (B) (UG/L)	SOL VED SOLIDS (RESI- DUE AT 180 C) (MG/L) 228	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 211 227 223 178	NESS (CA,MG) (MG/L) 118 125 115	CAR- BDNATE HARD- NESS (MG/L) 33 36 30 24	AD- SORP- TIGN RATIO	FIC COND- UCTANCE (MICRO- MHOS) 331 347 338 290	7.7 7.2 7.7 8.1	ATURE (DEG C)  10.0  6.0  3.0  7.6
OCT. 16 NOV. 18 DEC. 11 FEB. 10 MAR. 10	SOLVED FLUD- RIDE (F) (MG/L) -3 -3 -4	SOL VED NITRATE (N) (MG/L) .00 .20 .20 .10	SOL VED NITRATE (NO3) (MG/L) .0 .9 .9	SDL VED BORON (8) (UG/L) 30 60 50	SOL VED SOL IDS (RESI- DUE AT 180 C) (MG/L) 228 257 257	SOL VED SOL IDS (SUM OF CONSTI- TUENTS) (MG/L) 211 227 223 178 198	NESS (CA, MG) (MG/L) 118 125 115 100	CAR- BDNATE HARD- NESS (MG/L) 33 36 30 24	**************************************	FIC COND- UCTANCE (MICRO- MHOS) 331 347 338 290	7.7 7.2 7.7 8.1 8.3	10.0 6.0 3.0 7.6
OCT. 16 NOV. 18 DEC. 11 FEB. 10 APR. 15 MAY.	SOLVED FLUD- RIDE (F) (MG/L) • 3 • 3 • 4 • 2	SOL VED NITRATE (N) (MG/L) .00 .20 .20 .10 .00	SOL VED NITRATE (ND3) (MG/L) .0 .9 .9 .4 .0	SDL VED BDRON (8) (UG/L) 30 60 50 60	SOL VED SOL IDS (RESI- DUE AT 180 C) (MG/L) 228 257 257 185	SOL VED SOL IDS (SUM OF CONSTI- TUENTS) (MG/L) 211 227 223 178 198 321	NESS (CA,MG) (MG/L) 11B 125 115 100 110	CAR- BDNATE HARD- NESS (MG/L) 33 36 30 24 31	.9 1.0 1.0 1.0	FIC COND- UCTANCE (MICRO- MHOS) 331 347 338 290 326	7.7 7.2 7.7 8.1 8.3 8.0	10.0 6.0 3.0 7.6 7.0
OCT 16 NOV 18 DEC 11 FEB 10 MAR 10 APR 15 MAY 13 JUNE	SOLVED FLUD- RLDE (F) (MG/L1) -3 -3 -4 -23 -3	SOL VED NITRATE (N) (MG/L) .00 .20 .10 .00 .30	SOL VED NITRATE (ND3) (MG/L) .0 .9 .9 .4 .0 l.3	SDL VED BDRON (8) (UG/L) 30 60 50 60 	SOL VED SOL IDS (RES1- OVE AT 180 C) (MG/L) 228 257 257 185 	SOL VED SOL IDS (SUM OF CONSTITUENTS) (MG/L1)  211  227  223  178  198  321  356	NESS (CA,MG) (MG/L) 11B 125 115 100 110 158	CAR- BONATE HARD- NESS (NG/L) 33 36 30 24 31 60 73	AD- SORP- TION RATIO 1.0 1.0 1.5 1.7	FIC COND- UCTANCE (MICRO- MHOS) 331 347 338 290 326	7.7 7.2 7.7 8.1 8.3 8.0	10.0 10.0 6.0 3.0 7.6 7.0 3.2
OCT. 16 NOV. 18 DEC. 11 FEB. 10 MAR. 10 APR. 15 MAY 13 JUNE 10	SQUED FLUD- FLUD- RIDE (F1) (MG/L) .3 .3 .4 .2 	SOLVED NITRATE (N) (MG/L)	SOL VED NITRATE (NO3) (MG/L) -0 -9 -9 -4 -0 1.3 -4 3.1	SDL VED BOROM (B) (UG/L) 30 60 50 60  0	SOL VED SOL IDS (RES1- OVE AT 180 C) (MG/L)  228 257 257 185	SOL VED SOL 10S (SUM OF CONSTI- TUENTS) (MG/L) 221 227 223 178 198 321 356	NESS (CA,MG) (MG/L) 118 125 115 100 110 158 173	CAR- BONATE HARD- NESS (NG/L) 33 36 30 24 31 60 73	.9 1.0 1.0 .8 1.0 1.5 1.7	COND- UCTANCE (MICRO- MHOS) 331 347 338 290 326	7.7 7.2 7.7 8.1 8.3 8.0 6.0	10.0 10.0 6.0 3.0 7.6 7.0 3.2 12.0
OCT. 16 NOV. 18 DEC. 11 FEB. 10 MAR. 10 APR. 15 MAY 13 JUNE 10 JULY 15 AUG.	SOL VED FL UD- RIDE (F) (MG/L) .3 .3 .4 .2 	SOL VED NITRATE (N) (N) (MG/L)	SOL VED NITRATE (NO3) (MG/L) -0 -9 -9 -4 -0 -0 -3 -4 -3 -1 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4 -4	SDL VED BORON (8) (UG/L) 30 60 50 60 0	SOL VED SOL INS (RESI – DUE AT 180 CJ (MG/L) 228 257 257 185 – – –	SOL VED SOL 10S (SUM OF CONSTI-CONSTI-TUENTS) (MG/LI)  211 227 223 178 198 321 356 383 338	NESS (CA.MG) (MG/L)  11B  125  115  100  110  158  173  190  174	CAR- BONATE HARD- NESS (NG/L) 33 36 30 24 31 60 73 84 69	.9 1.0 1.0 .8 1.0 1.5 1.7	FIC COND- UCTANCE (MICRO- MHOS) 331 347 338 290 326	(UNITS)  7.7  7.2  7.7  8.1  8.3  8.0  8.0  8.3  8.2	10-0 6-0 3-0 7-6 7-0 3-2 12-0 14-5 21-0
OCT. 16 NOV. 18 DEC. 11 FEB. 10 MAR. 10 APR, 15 MAY 13 JUNE 10 JULY 15	SQUED FLUD- FLUD- RIDE (F1) (MG/L) .3 .3 .4 .2 	SOLVED NITRATE (N) (MG/L)	SOL VED NITRATE (NO3) (MG/L) -0 -9 -9 -4 -0 1.3 -4 3.1	SDL VED BOROM (B) (UG/L) 30 60 50 60  0	SOL VED SOL IDS (RES1- OVE AT 180 C) (MG/L)  228 257 257 185	SOL VED SOL 10S (SUM OF CONSTI- TUENTS) (MG/L) 221 227 223 178 198 321 356	NESS (CA,MG) (MG/L) 118 125 115 100 110 158 173	CAR- BONATE HARD- NESS (NG/L) 33 36 30 24 31 60 73	.9 1.0 1.0 .8 1.0 1.5 1.7	COND- UCTANCE (MICRO- MHOS) 331 347 338 290 326	7.7 7.2 7.7 8.1 8.3 8.0 6.0	10.0 10.0 6.0 3.0 7.6 7.0 3.2 12.0

## FIELD AND BIOCHEMICAL MEASUREMENTS

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TIME	DIS- CHARGE (CFS)	S PEC I- FIC COND- UC TANGE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	AIR TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIO- CHEM- ICAL DXYGEN DEMAND (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML)	STREP- TOCOCCI (CDL- ONIES PER 100 ML)
0445	450	525	3. 2					80	1100	100
0045	676	,,,	3.2							
0810	530	560	12.0	9.6				210	3500	40
0910	530	580	14.5	14.5					1 800	240
1000	282	525	21.0	30.0	60	9	1.4	<100	2200	20
								41.00	4200	100
1010	388	525	23.5	25.5				<100	4 300	100
1430	1400	580	19.5					<10	100	<10
	0645 0810 0910 1000	CHARGE (CFS)*  0645 658  0810 530  0910 530  1000 282  1010 388	TIME DIS- CHARGE (CFS)* UCTANCE (HICRO-MHDS)*  0645 658 535 0810 530 560 0910 530 580 1000 282 525 1010 388 525	TIME DIS- CHARGE (MICRO- MHDS) ATURE (CFS) 535 3.2 0810 520 560 12.0 0910 530 580 14.5 1000 282 525 21.0 1010 388 525 23.5	TIME	TIME DISCUSSION TO THE PROPER TRANSPORT OF THE PROPERTY OF THE	TIME	SPECI	SPECI	SPECI

## 09363500 ANIMAS RIVER NEAR CEDAR HILL, N. MEX.

LOCATION. --Lat 37°02'17" (revised), long 107°52'25", in sec.7, T.32 N., R.9 W., La Plata County, at gaging station 0.8 mile downstream from Florida River, 2.5 miles upstream from Colorado-New Mexico State line, and 8.5 miles north of Cedar Hill.

DRAINAGE AREA. -- 1,090 sq mi, approximately.

PERIOD OF RECORD.—Chemical analyses: July 1969 to September 1970. Sediment records: July to September 1970 (partial records).

REMARKS.--Bacteriological analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TI ME	DIS- Charge (CFS)	DIS- SOLVED SIL ICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOL VED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	8 ICAR- BONAT E (HCO3) (MG/L)
DCT. 15	1200	714	7.4		54	8. 0	13	1.6	134
NDV. 18	0910	520	5• 7		62	9.4	16	2.4	144
DEC. 10	0930	346	8.0		72	12	20	2.8	160
JAN. 14 Feb,	0850	320	8.1		76	11	22	3.0	160
10 MAR.	0750	254	6.9	:-	76	12	22	3. 2	168
10 APR.	0800	254	7. 8		88	22	34	3.6	176
14	0640	425	12	20	72	11	14	2.5	165
12 JUNE	0855	2050	5.8		39	5.3	5.0	. 9	100
09	0830	2228	5.6		38	5.0	5.8	1.1	88
14 AUG.	09 30	828	6. 3	290	45	6.3	11	1.9	102
11	1430	505	8.0	^	62	9.5	19	3.1	129
DATE	CAR - BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOL VED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOL VED NITRITE (N) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SCL VED BORON (8) (UG/L)
ост.	BONATE (CO3) (MG/L)	SOLVED SULFATE (SO4) (MG/L)	SOL VED CHLO- RIDE (CL) (MG/L)	SOLVED FLUO- RIDE (F) (MG/L)	SOL VED NITRITE (N) (MG/L)	SOLVED NITRATE (N) (MG/L)	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (P) (MG/L)	SCL VED BORON (8) (UG/L)
DCT. 15 NCV.	BONATE (CO3) (MG/L)	SOLVED SULFATE (SO4) (MG/L)	SOL VED CHLO- RIDE (CL) (MG/L)	SOLVED FLUO- RIDE (F) (MG/L)	SOL VED NITRITE (N) (MG/L)	SOLVED NITRATE (N) (MG/L)	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (P) (MG/L)	SCL VED BORON (8) (UG/L)
15 NOV. 18 DEC.	BONATE (CO3) (MG/L)	SOLVED SULFATE (SO4) (MG/L) 85	SOL VED CHLO- RIDE (CL) (MG/L)	SOLVED FLUO- RIDE (F) (MG/L)	SOL VED NITRITE (N) (MG/L)	SOLVED NITRATE (N) (MG/L)	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (P) (MG/L)	SCL VED BORON (8) (UG/L)
DCT. 15 NCV. 18 DEC. 10 JAN.	BONATE (CO3) (MG/L)	SOLVED SULFATE (SO4) (MG/L) 85 95	SOL VED CHLO- RIDE (CL) (MG/L) 11 12	SOLVED FLUO- RIDE (F) (MG/L)	SOL VED NITRITE (N) (MG/L)	SOLVED NITRATE (N) (MG/L) -20 -30	SOLVED NITRATE (NO3) (MG/L) •9 1.3	PHOS- PHORUS (P) (MG/L)	SCL VED BORON (8) (UG/L)
DCT. 15 NCV. 18 DEC. 10	BONATE (CO3) (MG/L) O	SOLVED SULFATE (SOL) (MG/L) 85 95 114 120	SOL VED CHLO- RIDE (CL) (MG/L) 11 12 13	SOLVED FLUO- RIDE (F) (MG/L)	SOL VED NITRITE (N) (MG/L)	SOL VED NITRATE (N) (MG/L) -20 -30 -00	SOL VED NITRATE (NO3) (MG/L) -9 1.3	PHOS- PHORUS (P) (MG/L)	SCL VED BORON (8) (UG/L)
DCT. 15 NGV. 18 DEC. 10 JAN. 14 FEB. 10 MAR.	BONATE (CO3) (MG/L) O O	SOLVED SULFATE (SO4) (MG/L) 85 95	SOL VED CHLO- RIDE (CL) (MG/L) 11 12	SOLVED FLUO- RIDE (F) (MG/L)	SOL VED NITRITE (NITRITE (MG/L)	SOL VED NITRATE (N) (MG/L) .20 .30 .00 .40	SOLVED NITRATE (NO3) (MG/L) -9 1.3	PHOS- PHORUS (P) (MG/L)	SCL VED BORON (8) (UG/L)
DCT. 15 NCV. 18 DEC. 1Q JAN. 14 FEB. 10 MAR. 10	BONATE (CO3) (MG/L) 0 0	SOLVED SULFATE (SO4) (MG/L) 85 95 114 120	SOL VED CHLO- RIDE (CL) (MG/L) 11 12 13 15	SOLVED FLUO- RIDE (F) (MG/L) -4 -4 -3 -7	SOL VED NITRITE (N) (MG/L)	SOL VED NITRATE (N) (MG/L) -20 -30 -00	SOLVED NITRATE (NO3) (MG/L) -9 1.3 .0 1.8	PHOS- PHORUS (P) (MG/L)	SCL VED BOR ON (8) (UG/L)
DCT. 15 NGV. 16 DEC. 10 JAN. 14 FE8. 10 MAR. 10 APR. 14 MAY	BONATE (CO3) (MG/L) 0 0	SOLVED SULFATE (SD4) (MG/L) 85 95 114 120 108	SOL VED CHLO- RIDE (CL) (MG/L) 11 12 13 15 26	SOLVED FLUO- RIDE (F) (MG/L) -4 -4 -3 -7 -4	SOL VED NITRITE (N) (MG/L)	SOL VEO NITRATE (N) (MG/L) -20 -30 -00 -40 -20 -40	SOL VED NITRATE (NO3) (MG/L) -9 1.3 -0 1.8	PHOS- PHORUS (P) (MG/L)	SCL VED BORON (8) (UG/L)
DCT. 15 NGV. 16 DEC. 10 JAN. 14 FE8. 10 MARR. 10 APR. 14 JUNE 09	BONATE (CO3) (MG/L) 0 0 0	SOLVED SULFATE (SD4) (MG/L) 85 95 114 120 108 195	SOL VED CHLO- RIDE (CL) (MG/L) 11 12 13 15 26 22	SOLVED FLUOR RIDE (F) (MG/L) .4 .4 .3 .7 .4 .5 .3	SOL VED NITRITE (N) (MG/L)	SOL VED NITRATE (N) (MG/L) -20 -30 -00 -40 -20 -40	SOL VED NITRATE (NO3) (NG/L) .9 1.3 .0 1.8 .9	PHOS- PHORUS (P) (MG/L)	SCL VED BORON (8) (UG/L)
DCT. 15 NGV. 18 DEC. 10 JAN. 14 FEB. 10 MAR. 10 APR. 14 HAY.	BONATE (CO3) (MG/L) 0 0 0 0 0	SOLVED SULFATE (SU4) (MG/L) 85 95 114 120 108 195 97	SOL VED CHLO- RIDE (CL) (MG/L)  11  12  13  15  26  22  11  3*1	SOLVED FLUOR	SOL VED NITRITE (N) (MG/L)	SOLVED NITRATE (N) (MG/L) .20 .30 .00 .40 .20 .40 .20 .30	SOLVED NITRATE (NO3) (NG/L)  .9 1.3 .0 1.8 .9 1.8	PHOS- PHORUS (P) (MG/L)	SCL VED 80RON (8) (106 / L)

# 09363500 ANIMAS RIVER NEAR CEDAR HILL, N. MEX. -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	DIS-	-2 ID						
	SOLVED	SOLVED		NDN-	SODIUM	SPECI-		
	SOLIDS	SOLIDS		CAR-	AO-	FIC		
	(RESI-	(SUM OF	HARD-	B ONA TE	SORP-	COND-		
	DUE AT	CONSTI-	NESS	HARD-	T ION	UCTANCE	PH	TEMPER-
	180 C)	TUENTS)	(CA,MG)	NESS	RATIO	(MICRO-		A TUR E
DATE	(MG/L)	(MG/L)	(MG/L)	(MG/L)		MHOS)	(UNITS)	(DEG C)
OCT.								
15	257	247	178	68	.4			9.0
NOV.								
18	270	275	195	77	. 5		7.7	0.0
OEC.								
10	336	321	230	99	. 6			0.0
JAN.								
14	337	336	238	107	•6			0.0
FEB.								
10	361	338	240	102	•6			1.2
MAR.								
10	479	462	304	160	.8			5.1
APR.								
14	300	302	230	95	• 4		8.0	5.3
MA Y					_			11.2
12	174	154	120	38	•2			11.02
JUNE					-			8.5
09	162	152	112	40	.2		7.7	0.0
JULY								15.0
14	200	193	140	56	.4			1200
AUG.					_			24.5
11	311	282	198	78	.6			24.5

FIELD AND BIOCHEMICAL DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (OEG C)	AIR TEMPER- ATURE (OEG C)	COLOR (PLAT- 1 NUM- COBALT UNITS)
OCT.							
15	1200	714	420	8.6	9.0		
NOV.							
18 DEC.	0910	520	460		0.0		
10	0930	346	512	8.3	0.0		
JAN. 14	0850	320	535	8.4			
FE8.	0000	320	222	0.4	0.0		5
10	0750	254	560	8.1	1.2		3
MAR. 10	0800	254	710	8.1	5.1	2.6	5
APR.		27		0.1		2.00	
14 MAY	0640	425	495		5. 3	-	3
12	0855	2050	258	8.2	11.2	11.4	10
JUNE							
JULY	0830	<b>2</b> 228	238		8.5	13.5	4
14	0930	828	340	8.4	15.0	19.5	3
AUG.							_
11 SEP.	1430	505	452	8. 6	24.5	34.5	3
09	1400	2150	315	8. 3	15.0	28.0	
OATE	TUR- BID- ITY (JTU)	DIS- SOLVED OXYGEN (MG/L)	CHEM- ICAL OXYGEN OEMAND (LOW LEVEL) (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	IMME- DIATE COLI- FORM (COL- PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
							200
OCT. 15		10.1			<10	<100	<10
NOV.							
18 DEC.		12.2			20	100	<10
10		12.1			<10	100	<10
JAN. 14		11.4			240	1000	40
FEB.		11.7			240	1000	40
10		10.7			120	500	<10
10	1250				<10	<100	20
APR.							
I4 May	51	9.6			550	1800	80
12	180	9.1				2100	20
09	14	9.2			60	300	70
JULY 14	1.5			_			
AUG.	15	8. 2	14	.8	<100	1600	<10
11	10	7.8	7	2.8	E15000		<10
SEP. 09	35	8.1	11	•6	<100	<100	10
			•1	•0	1100	1100	10

E ESTIMATED

# 09363500 ANIMAS RIVER NEAR CEDAR HILL, N. MEX.--Continued

BIOCHEMICAL, SPECTROGRAPH, AND RADIO CHEMICAL ANALYSES
WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970
(FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY)

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L)	DIS. ORTHO + HYDRO. PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVEO CAD- MIUM (CD) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SGLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	(NE/F)
OCT.	1205	<.05	.180	<100	<2	<5	10	<20	40	<10
DEC.										
10 JAN.	0935									
14	0855	.20	.190	<100	<4	<10	<10	<40	90	€20
FEB. 10 MAR.	0755									
10	0805									
APR. 14 May	0645	•24	-100	<100	<3	<10	<30	<40	40	<20
12	0900									
JUNE 09 JULY	0835	.19	.060	<10		<5	<50		40	
14	0935			13		<4			4D	
DATE	DIS- SOLVED VANA- DIUM (V)	DIS- SOLVED ZINC (ZN)	DIS- SOLVED ALPHA	SUS- PENDED ALPHA	DIS- SOLVED GROSS BETA AS CS-137	SUS- PENDED GROSS BETA AS CS-137	DIS- SOLVED RADIUM 226 (RA)	TOTAL STRON- TIUM 90	DIS- SOLVED TRITTUM	DIS- SOLVED NATURAL URANIUM (U)
DATE	SOLVED VANA- DIUM	SOLVED ZINC	SOLVED	PENDED	SOLVED GROSS BETA AS	PENDED GROSS BETA AS	SOLVED RADIUM 226	STRON-	SOLVED	SOLVED NATURAL URANIUM
DCT. 15A	SOLVED VANA- DIUM (V)	SOLVED ZINC (ZN)	SOL VED ALPHA	PENDED ALPHA	SOLVED GRDSS BETA AS CS-137	PENDED GRDSS BETA AS CS-137	SOLVED RADIUM 226 (RA)	STRON- TIUM 90	SOLVED TRITIUM	SDLVED NATURAL URANIUM (U)
DCT. 15A DEC. 10	SOLVED VANA- DIUM (V) (UG/L)	SOLVED ZINC (ZN) (UG/L)	SOLVED ALPHA (PC/L)	PENDED ALPHA (PC/L)	SOLVED GROSS BETA AS CS-137 (PC/C)	PENDED GROSS BETA AS CS-137 (PC/L)	SOLVED RADIUM 226 (RA) (PC/L)	STRON- TIUM 90 (PC/L)	SOLVED TRITIUM	SOLVED NATURAL URANIUM (U) (UG/L)
DCT 15.A DEC. 10 JAN. 14	SOLVED VANA- DIUM (V) (UG/L)	SOLVED ZINC (ZN) (UG/L)	SOLVED ALPHA (PC/L)	PENDED ALPHA (PC/L)	SOLVED GROSS BETA AS CS-137 (PC/C)	PENDED GRDSS BETA AS CS-137 (PC/L)	SOLVED RADIUM 226 (RA) (PC/L)	STRON- TIUM 90 (PC/L)	SOLVED TRITIUM	SOLVED NATURAL URANIUM (U) (UG/L)
DCT. 15A DEC. 10 JAN. 14 FEB.	SOLVED VANA- DIUM (V) (UG/L)	SOLVED ZINC (ZN) (UG/L)	SOLVED ALPHA (PC/L) 2.0 2.0	PENDED ALPHA (PC/L) 2.0	SOLVED GROSS BETA AS CS-137 (PC/C)	PENDED GROSS BETA AS CS-137 (PC/L)	SOLVED RADIUM 226 (RA) (PC/L)	STRON- TIUM 90 (PC/L)	SOLVED TRITIUM	SOLVED NATURAL URANIUM (U) (UG/L) 2.4
DCT. 15A DEC. 10 JAN. 14 FEB. 10	SOLVED VANA- DIUM (V) (UG/L)	SOLVED ZINC (ZN) (UG/L) 45 	SOLVED ALPHA (PC/L) 2.0 2.0 2.0	PENDED ALPHA (PC/L) 2.0 .2	SOLVED GROSS BETA AS CS-137 (PC/L) 3.0 4.0	PENDED GROSS BETA AS CS-137 (PC/L)	SOLVED RADIUM 226 (RA) (PC/L)	STRON- TIUM 90 (PC/L)	SOLVED TRITIUM	SOLVED NATURAL URANIUM (U) (UG/L) 2.4 3.3
DCT 15A DEC 10 JAN 14 FEB 10 MAR 10 APR	SOLVED VANA- DIUM (V) (UG/L)	SDLVED ZINC (ZN) (UG/L) 45  120	SOLVED ALPHA (PC/L) 2.0 2.0 2.0 2.0	PENDED ALPHA (PC/L) 2.0 .2 .1 .1	SOLVED GROSS BETA AS CS-137 (PC/C) 3.0 4.0 4.0	PENDED GROSS BETA AS CS-137 (PC/L) 6.0 .4 .5	SDLVED RADIUM 226 (RA) (PC/L) .0 .0	STRON- TIUM 90 (PC/L)	SOLVED TRITIUM	SOLVED NATURAL URANIUM (U) (UG/L) 2.4 3.3 2.5
DCT 15A DEC 10 JAN 14 FEB 10 MAR 10 APR 14A MAY 12	SOLVED VANA- DIUM (V) (UG/L)	SDLVED ZINC (ZN) (UG/L) 45  120	SOLVED ALPHA (PC/L) 2.0 2.0 2.0 2.0	PENDED ALPHA (PC/L)  2.0  .2  .1  .1 2.0	SOLVED GROSS BETA AS CS-137 (PC/C) 3.0 4.0 4.0	PENDED GROSS BETA AS CS-137 (PC/LI 6.0 .4 .5	SDLVED RADIUM 226 (RA) (PC/L) .0 .0	STRON- TIUM 90 (PC/L)	SOLVED TRITTUM (PC/L)	SOLVED NATURAL URANIUM (U) (UG/L) 2.4 3.3 2.5 3.7 3.5
DCT	SOLVED VANA- DIUM (V) (UG/L)	SDLVED ZINC (ZN) (UG/L) 45  120  30	SOLVED ALPHA (PC/L) 2.0 2.0 2.0 2.0 2.0	PENDED ALPHA (PC/L)  2.0  .2  .1  .1  2.0  2.0	SOLVED GROSS BETA AS CS-137 (PC/C) 3.0 4.0 4.0 5.0 6.0	PENDED GROSS BETA AS CS-137 (PC/L) 6.0 .4 .5 1.0	SOLVED RADIUM 226 (RA) (PC/L) .0 .0 .0 .1 .0	STRON- TIUM 90 (PC/L)	SOLVED TRITTUM (PC/L)	SOLVED NATURAL URANIUM (U) (UG/L) 2.4 3.3 2.5 3.7 3.5

A INCLUDES O PICOCURIE PER LITRE OF STRONTIUM 89. B INCLUDES 1 PICOCURIE PER LITRE OF STRONTIUM 89.

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	WATER TEM- PERA- TURE ( C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
JUL 14, 19		15.0	828	132	295
SEP 9		24.5	505	260	355

# 09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.

LOCATION (revised).--Lat 36°43'12", long 108°12'08", in SE½ sec.16, T.29 N., R.13 W., San Juan County, at gaging station at bridge on former State Highway 17, 0.6 mile downstream from bridge on State Highway 17 and 1.3 miles upstream from mouth.

DRAINAGE AREA, -- 1,360 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: June 1940 to December 1969 (daily), January to September 1970 (monthly), Specific conductance: October 1969 to September 1970, Water temperatures: December 1950 to September 1970, Sediment records: December 1950 to September 1970.

#### EXTREMES . -- 1969-70:

REMENS, --1969-70: Specific conductance: Maximum daily, 806 micromhos Jan. 7; minimum daily, 208 micromhos May 23. Water temperatures: Maximum, 30.0°C July 31; minimum, freezing point on Jan. 1, 4-6. Sediment concentrations: Maximum daily, 20,200 mg/l Aug. 21; minimum daily, 11 mg/l Dec. 28. Sediment discharge: Maximum daily, 125,000 tons Sept. 6; minimum daily, 8.9 tons Feb. 25.

Period of record:
Dissolved solids (1940-49, 1952-54, 1956-69): Maximum, 1,500 mg/l Aug. 19, 1949; minimum, 111 mg/l June 11-17, 19-0, 1944.
Hardness (1956-69): Maximum, 608 mg/l July 30, 1961; minimum, 80 mg/l July 1-7, 1957.
Specific conductance (1941-70): Maximum daily, 1,980 micrombos Aug. 19, 1944; minimum daily, 170 micrombos June 27, 1944.
Water temperatures: Maximum, 32,0°C Aug. 26, 1966; minimum, freezing point on many days during winter periods.
Sediment concentrations: Maximum daily, 36,800 mg/l July 23, 1954; minimum daily, 1 mg/l on several days during September 1956, 1958.
Sediment discharge: Maximum daily, 337,000 tons July 23, 1954; minimum daily, less than 0.50 ton on many days during 1955-57, 1959, 1960, and 1963.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVER MAG- NE- SIUM (MG) (MG/L)	DIS- SDLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)
OCT.		431						50		168
01-03			11		79	11		48		155
04-21		786	9.9		7C	9.1		48 97		162
22		1220	17		78	9.1		97	1.8	154
23-31 NGV.		1000	9.2	C	66	10	20		1.0	134
01-03		782	7.8		70	11		22		153
01-03		514	9.1		78	12	~-	42		164
19	1215	390			~-		~-	~-		
DEC.	1215	390								
01-14		444	7.8		84	19	~-	35		177
11	G810	440	7.3		90	14	32		2.8	185
15-28	3010	436	6.2	~-	87	12		33		176
29-31		317	0.2		~-					184
JAN.		221								
14	1145	408	7.6	10	88	12	29		2.8	179
FE8.	1147	400	1.0	10	•••	**	٠,			
10	1725	255	5.0	10	89	14	32		3.1	158
MAR.	1123	2,55	,	10	0,	• •	72			
10	1045	270	8.0	20	105	17	39		3.4	208
APR.	1043	2.0	0.0	•			٠.			
15	0715	372	6.7	10	84	12	23		2.7	180
MAY	0.13				٠.					
13	C910	1640	5.4	56	38	5.3	6.9		.9	95
JUNE	• • • • •									
10	0930	1865	5.8	G	42	5.7	10		1.2	97
JULY										
15	1030	828	6.2	G	58	8.0	19		2.1	123
AUG.				-						
12	0850	240	9.2	c	86	12	32		2.8	185
SEP.										
07 A	1200	7850			42	3.9	8.8			91
AR.	1045	3440	6 . R	10	43	5.3	9.2		2.1	92

A ANALYZED FROM NATIVE WATER USED IN PARTICLE-SIZE DETERMINATION OF SUSPENDED SEDIMENT.

# 09364500 ANIMAS RIVER AT FARMINGTON, N. MEX. -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

OCT.  01-03
04-21 0 116 12 .420 .9314 22 0 225 15 .443 1.923-31 0 1J9 10 .325 1.170 295 NOV.  NOV. 01-03 0 12C 11 .316 .7332 04-30 0 123 15 .314 .6379 19
22 0 225 15 .443 1.9 232 23-31 0 109 10 .325 1.1 70 295 NOV.  01-03 0 12C 11 .316 .7332 04-30 0 123 15 .314 .6 379 19 14
23-31 0 109 10 .325 1.1 70 295  NOV.  01-03 0 12C 11 .316 .7332  04-30 0 123 15 .316 .7379  1914 .677  1914 .677  0EC.  01-14 0 152 15 .325 1.1410  11 0 162 15 .427 1.2432  15-28 0 164 17 .420 .9417  29-31 0417  29-31 0455  JAN.  14 0 157 15 .740 1.8 .03 140 417  FEB.  10 0 179 20 .409 .4 .02 140 437  MAR.  10 0 196 22 .520 .9 .04 180 5C7  APR.
NOV.  01-03
01-03
04-3D
19
DEC. 01-14 0 152 15 .325 1.1 410 11 0 162 15 .427 1.2 432 15-28 0 164 17 .420 .9 417 29-31 0 455 JAN. 14 0 157 15 .740 1.8 .03 140 417 FEB. 10 0 179 20 .409 .4 .02 140 437 MAR. 10 0 196 22 .520 .9 .04 180 5C7 APR.
C1-14 0 152 15 .325 1.1 410 11 0 162 15 .427 1.2 432 15-28 0 164 17 .420 .9 417 29-31 0 455  JAN. 14 0 157 15 .740 1.8 .03 140 417 FEB. 10 0 179 20 .409 .4 .02 140 437 MAR. 1C 0 196 22 .520 .9 .04 180 5C7 APR.
11 0 162 15 .427 1.2 432 15-28 0 164 17 .420 .9 417 29-31 0 455 JAN.  14 0 157 15 .740 1.8 .03 140 417 FEB.  10 0 179 20 .409 .4 .02 140 437 MAR.  10 0 196 22 .520 .9 .04 180 5C7 APR.
15-28 0 164 17 .420 .9 417 .29-31 0 455 .38
29-31 0 455 JAN. 14 0 157 15 .740 1.8 .03 140 417 FEB. 10 0 179 20 .409 .4 .02 140 437 MAR. 1C 0 196 22 .520 .9 .04 180 5C7 APR.
JAN- 14 0 157 15 .740 1.8 .03 140 417 FEB. 10 0 179 20 .409 .4 .02 140 437 MAR. 10 0 196 22 .520 .9 .04 180 5C7 APR.
14 0 157 15 .740 1.8 .03 140 417 FEB. 10 0 179 20 .409 .4 .02 140 437 MAR. 10 0 196 22 .520 .9 .04 180 5C7 APR.
FEB. 10 0 179 20 .409 .4 .02 140 437 MAR. 10 0 196 22 .520 .9 .04 180 5C7 APR.
10 0 179 20 .409 .4 .02 140 437 MAR. 10 0 196 22 .520 .9 .04 180 5C7 APR.
MAR. 10 0 196 22 .520 .9 .04 180 5C7 APR.
APR.
15 0 140 13 .4 .02 .20 .9 .03 120 373
MAY
13 0 53 2.7 .330 1.3 .03 30 176
JUNE
10 0 59 4.5 .420 .9 .01 30 188
JULY
15 0 98 10 .4 .00 .00 .0 .00 70 272 AUG.
12 0 161 16 .500 .0 .02 130 441 SEP-
07A 0 180
08 0 68 4.6 .411 .5 .01 80 202

DATE	DIS- TOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SOCIUM AD- SORP- TION RATIO	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.							
01-03	384	244	196	1.4	592	8.0	
94-21	342	212	85	1.4	526	7.9	
22	523	232	99	2.8	752	7.9	
23-31	303	206	80	.6	494	7.8	
NOV.	303		•••				
01-03	318	220	94	.6	512	7.6	
04-30	361	244	110	1.2	575	7.7	
19					594		3.5
DEC.							
01-14	401	250	105	1.0	615	7.8	
11	416	284	132	. B	664	8.1	0.0
15-28	408	268	124	.9	636	7.9	
29-31					688	7.9	
JAN.							
14	4G2	276	130	.8			0.6
FEB.							
10	421	272	142	. 8			8.0
MAR.							
10	494	320	150	1.0			7.6
APR.							
15	372	256	168	.6			4.0
MAY							
13	161	117	38	.3		7.6	9.1
JUNE							
10	177	1 30	50	.4			10.0
JULY							_
15	262	181	80	.6			19.5
AUG.							
12	409	276	128	. B		8.2	20.0
SEP.							
07A		121	46	• 3	303	8.0	16.0
08	185	129	54	-4			11.5

A ANALYZED FROM NATIVE WATER USED IN PARTICLE-SIZE DETERMINATION OF SUSPENDED SEDIMENT.

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SAN JUAN RIVER BASIN 09364500 ANIMAS RIVER AT FARMINGTON, N. MEX. -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)
JAN.							
14 FEB.	1145	408	640	8.7	0.6		3
10	1725	255	680	8.6	8.0		0
MAR. 10 APR.	1045	270	765	8.3	7. 6	11.3	5
15	0715	372	59 <b>0</b>		4.0	-	3
13 JUNE	091 0	1640	273	8.2	9.1	18.2	25
10	0930	1865	290		10.0	16.0	5
15	1030	828	445	8.4	19.5	31.0	5
AUG. 12 SEP.	0850	240	630	8.2	20.0	22.5	5
08	1045	3440	320	8.2	11.5	27.5	10
DA TE	TUR- 81D- 1TY (JTU)	DIS- SOLVED OXYGEN (MG/L)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIO CHEM- ICAL OXYGEN DEMAND (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	I MME- DIATE COLI- FORM (COL- PER 100 ML)	STREP- TDCOCCI (COL- ON IES PER 100 ML)
DATE Jano	BID- ITY	SOL VED OXY GEN	ICAL OXYGEN DEMAND (LOW LEVEL)	CHEM- ICAL DXYGEN DEMAND	COLI- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL. PER 100 ML)	TDCOCCI (COL- ON IES PER 100 ML)
JAN. 14	BID- ITY	SOL VED OXY GEN	ICAL OXYGEN DEMAND (LOW LEVEL)	CHEM- ICAL DXYGEN DEMAND	COLI- FORM (COL. PER	DIATE COLI- FORM (COL- PER	TDCOCCI (COL- ON IES PER
JAN.	BID- ITY	SOLVED OXYGEN (MG/L)	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL. PER 100 ML)	TDCOCCI (COL- ON IES PER 100 ML)
JAN. 14 FEB. 10 MAR. 10	BID- ITY	SOLVED OXYGEN (MG/L)	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML)	TDCOCCI (COL- ON IES PER 100 HL)
JAN. 14 FEB. 10 MAR. 10 APR.	81D- 1TY (JTU)	SDLVED DXYGEN (MG/L) 12.4 10.3	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML) 700	TDCOCCI (COL- ON IES PER 100 ML)
JAN. 14 FEB. 10 MAR. 10 APR. 15 MAY	8 ID- 1TY (JTU)	SDL VED DXYGEN (MG/L) 12.4 10.3	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXYGEN DE MAND (MG/L)	COLI- FORM (COL. PER 100 ML) 70 10	DIATE COLI- FORM (COL- PER 100 ML) 700 100	TDCOCCI (COL- ON IES PER 100 ML)
JAN- 14 FEB. 10 MAR. 10 APR. 15 MAY 13 JUNE 10	BID- ITY (JTU)  125	SOLVED OXYGEN (MG/L) 12.4 10.3 10.0 10.4	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DE MAND (MG/L) 1.2 1.6	COLI- FORM (COL. PER 100 ML) 70 10 <10 1520	DIATE COLI- FORM (COL- PER 100 ML) 700 100 5300 7300	TDCOCCI (COL- ONIES PER 100 HL) <10 10 40
JAN. 14 FEB. 10 MAR. 10 APR. 15 MAY 13 JUNE 10 JULY	125 125 192	SDL VED DXY GEN (MG/L) 12-4 10-3 10-0 10-4 9-7	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL DXYGEN DE MAND (MG/L) 1.2 1.6  2.5 1.8	COLI- FORM (COL. PER 100 ML) 70 10 <10	DIATE COLI- FORM (COL- PER 100 ML) 700 100 5300 7300 1800	TDCOCCI (COL- ONIES PER 100 HL) <10 10 40 90 50
JAN. 14 FEB. 10 MAR. 15 APR. 15 JUNE 10 JUNE	125 125 192	SDLVED DXYGEN (MG/L) 12.4 10.3 10.0 10.4 9.7 9.2	ICAL OXYGEN DEMAND (LOW LEVEL) 10 16  9	CHEM- ICAL DXYGEN DE MAND (MG/L) 1.2 1.6  2.5 1.8	COLI- FORM (COL. PER 100 ML) 70 10 <10	DIATE COLI- FORM (COL- PER 100 ML) 700 100 5300 7300 1800 3500	T DECOCCI (COL- ON IES PER 100 ML) <10 10 40 90 50 70

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASURFMENT)

DAY	OCT	NOV	DEC	AAL	FEE	MAP	APR	MAY	JUN	JUL	AUG	SEP
1	581	494	589	718	678	679	772	536	224	301	636	719
2	587	458	604	650	658	685	778	557	242	328	638	726
3	568	530	597	558	673	663	781	577	242	354		667
3 4	517	557	59 E	625	685	664	791	577	241	384	659	675
5	512	553	587	783	670	706	795	502	287	379	638	670
6	548	532	592	760	661	698	758	384	288	382	666	286
ž	549	547	605	806	652	708	755	356	296	397	625	279
	535	540	614	756	678	706	700	302	398	351	598	315
Š	507	540	615	733	664	762	665	297	304	379	606	332
10	475	554	612	685	655	774	612	350	308	330	593	395
10	417	334	CIZ	665	633	114	612	350	300	330	273	393
11	472	548	626	649	668	600	602	375	313	339	605	412
12	471	561	634	629	662	735	576	274	310	398	624	459
13	483	550	636	640	661	745	588	281	328	408	627	456
14	501	559	632	633	675	715	593	280	332	432	705	261
15	508	5 <b>63</b>	620	641	692	712	576	264	312	439	720	232
16	504	579	626	658	675	756	586	253	300	470	754	276
17	498	580	622	66C	663	744	588	242	288	475	668	300
iė	499	582	623	685	689	770	590	232	275	500	577	332
19	495	586	628	685	679	735	578	216	256	495	552	366
20	479	617	637	682	674	730	596	224	238	501	546	412
21	495											
22		615	627	675	690	709	614	219	235	513	737	412
23	729	581	624	674	704	769	607	227	239	526	559	
	480	569	628	660	698	729	622	208	258	516	546	
24	484	570	627	664	669	747	634	216	276	474	572	
25	485	569	633	671	698	764	624	212	243	480	590	
26	485	576	639	67C	689	774	573	220	242	522	613	
27	476	578	639	667	689	769	573	226	249	542	612	
26	491	578	667	670	691	750	438	225	248	560	612	
29	480	590	664	67C		769	448	230	254	573	632	
30	483	592	686	696		747	494	251	272	577	664	
31	731		692	710		765		245		580	714	
AVG	512	563	627	681	<b>6</b> 76	735	630	308	277	449	630	

# 09364500 ANIMAS RIVER AT FARMINGTON, N. MEX. -- Continued

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					(ONCE-DA	ILY MEASU	REMENT)					
DAY	CCT	NOV	DEC	MAL	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	8.0	5.0	0	4.0	8.0	6.0	13.0	14.0	20.0	21.0	25.0
2	17.0	8.0	3.0	ĭ.0	2.0	8.0	8.0	18.0	10.0	20.0	25.0	23.0
3	13.0	7.0	5.0	3.0	2.0	8.0	10.0	8.0	15.0	18.0		25.0
4	12.0	8.0	5.0	0	3.0	9.0	12.0	18.0	18.0	20.0	25.0	23.0
5	8.0	9.0	3.0	Ö	3.0	10.0	12.0	19.0	11.0	20.0	24.0	16.0
6	13.0	9.0	5.0	0	3.0	10.0	13.0	20.0	12.0	20.0	25.0	14.0
7	10.0	9.0	4.0	1.0	2.0	10.0	13.0	15.0	15.0	21.0	27.0	14.0
8	15.0	9.0	3.0	1.0	4.0	9.0	15.0	14.0	16.0	20.0	21.0	16.0
9	14.0	9.0	3.0	2.0	8.0	10.C	13.0	10.0	12.0	22.0	21.0	17.0
10	14.0	8.0	3.0	2.0	4.0	8.0	15.0	15.0	12.0	23.0	26.0	16.0
11	10.0	12.0	2.0	2.0	8.0	6.C	15.0	17.0	7.0	23.0	27.0	18.0
12	15.0	10.0	1.0	1.0	10.0	10.0	16.0	18.0	10.0	23.0	22.0	20.0
13	11.0	10.0	2.0	3.0	8.0	10.0	14.0	19.0	18.0	25.0	23.0	15.0
14	12.0	9.0	3.0	2.0	8.0	11.0	11.0	20.0	19.0	25.0	27.0	17.0
15	12.0	5.0	3.0	3.0	8.0	11.0	12.0	20.0	20.0	25.0	22.0	14.0
16	10.0	7.0	4.0	3.0	8.0	10.0	14.0	20.0	21.0	25.0	20.0	15.0
17	10.0	4.0	5.0	4.0	10.0	6.0	9.0	20.0	22.0	26.0	25.0	14.0
18	10.0	4.0	5.0	3.0	6.0	5.0	9.0	22.0	20.0	25.0	25.0	15.0
19	11.0	3.0	5.0	3.0	8.0	10.0	10.0	19.0	20.0	25.0	24.0	
20	12.0	3.0	4.0	3.0	8.0	9.0	14.0	18.0	20.0	26.0	23.0	17.0
21	12.0	3.0	7.0	3.0	9.0	8.C	14.0	14.0	20.0	24.0	24.0	17.0
22	11.0	5.0	7.0	3.0	5.0	10.0	14.0	17.0	20.0	24.0	18.0	15.0
23	10.0	6.0	6.0	5.0	5.0	14.C	15.0	17.0	18.0	24.0	23.0	15.0
24	9.0	5.0	5.0	4.0	5.0	9.0	16.0	13.0	20.0	22.0	25.0	15.0
25	9.0	6.0	6.0	5.0	9.0	8.0	18.0	12.0	21.0	20.0	25.0	13.0
26	9.0	6.0	5.0	7.0	10.0	9.0	20.0	11.0	21.0	19.0	25.0	
27	10.0	7.0	4.0	5.0	9.0	6.0	18.0	13.0	19.0	22.0	25.0	
28	11.0	5.0	3.0	5.0	4.0	7.0	15.0	15.0	20.0	24.0		
29	8.0	6.0	3.0	5.0		7.0	12.0	14.0	20.0	25.0	20.0	17.0
30	5.0	4.0	5.0	2.0		6.0	13.0	15.0	20.0	25.0	22.0	18.0
31	8.0		1.0	5.0		5.0		14.0		30.0	24.0	
AVG	11.5	7.0	4.0	3.0	6.0	8.5	13.0	16.0	17.0	23.0	23.5	17.0

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		OCTOBER		,	NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)
1	400	420	454	855	650	1500	448	134	162
ž	400	355	383	810	190	416	464	162	203
3	498	1360	3310	656	310	549	456	56	69
4	1010	12100	36200	600	375	608	464	29	36
5	696	1200	2260	616	315	524	50 4	102	139
6	608	545	895	584	315	497	456	37	46
7	608	515	845	584	275	434	365	19	19
8	648	630	1100	568	120	184	372	90	90
9	712	730	1400	600	60	97	490	64	85
10	801	810	1750	600	85	138	576	127	198
11	828	505	1130	528	205	292	504	127	173
12	B28	380	850	488	205	270	496	147	197
13	801	60 D	1300	520	225	316	536	57	82
14	756	810	1650	496	230	308	552	46	69
15	765	750	1550	440	135	160	536	98	142
16	747	525	1060	448	170	206	496	40	54
17	875	890	2100	624	145	244	488	24	32
18	927	705	1760	50 4	570	776	480	67	87
19	963	395	1030	399	395	426	480	70	91
20	1020	670	1850	424	250	286	432	30	35
21	972	315	827	480	245	318	456	24	30
22	1460	5660	23000	520	270	379	464	43	54
23	1450	6010	24200	496	110	147	448	20	24
24	1090	880	2590	496	156	209	424	34	39
25	1000	490	1320	448	210	254	400	17	18
26	981	310	821	424	56	64	365	12	12
27	945	280	714	456	29	36	344	14	13
28	918	320	793	440	23	27	330	11	9.8
29	1010	1250	3410	386	84	88	31.8	12	10
30	927	585	1460	408	176	194	265	25	18
31	873	190	448				270	38	28
TOTAL	26517		122460	15898		9947	13679		2264.8

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# 09364500 ANIMAS RIVER AT FARMINGTON, N. MEX.--Continued

SUSPENDED-SECIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/CAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	280 270 260 270 260	43 32 24 39 32	33 23 17 28 22	294 288 250 270 324	40 37 40 32 26	32 29 27 23 23	220 276 351 312 265	41 47 114 132 173	24 35 108 !!! 124
6 7 8 9 10	250 240 250 260 300	25 28 44 52 57	17 18 30 37 46	324 306 306 294 294	30 33 42 34 30	26 27 35 27 24	294 294 265 270 255	109 67 77 234 447	87 53 55 171 308
11 12 13 14 15	400 410 390 370 370	84 95 66 103 85	91 105 69 103 85	294 300 318 324 306	21 20 26 31 63	17 16 22 27 52	265 270 245 235 240	825 375 120 54 48	590 273 79 34 31
16 17 18 19 20	358 365 358 464 393	34 39 54 47 56	33 38 52 59 59	270 270 280 276 245	34 30 24 22 24	25 22 18 16 16	230 215 225 215 220	80 106 140 135 84	50 62 85 78 50
21 22 23 24 25	424 432 424 424 408	38 27 33 32 30	44 31 38 37 33	250 265 250 250 235	37 26 28 19 14	25 19 19 13 8.9	195 148 142 166 170	85 115 72 30 95	45 46 28 13 44
26 27 28 29 30 31	386 379 358 318 240 245	25 18 26 32 60 73	26 18 25 27 39 48	225 195 205 	16 18 54 	9.7 9.5 30	156 235 230 156 195 245	72 114 127 55 110 235	30 72 79 23 58 155
TOTAL	10556		1331	7708		638.1	7200		3001
		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	APRIL MEAN CDNCEN- TRATION (MG/L)	SEOIMENT Discharge (Tons/Day)	MFAN Discharge (CFS)	MAY ME AN CONCEN- TRATION (MG/L)	SED [MENT DI SCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	JUNE MEAN CONCEN- TRATION (MG/L)	SEDIMENT OISCHARGE (TONS/DAY)
DAY 1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	ME AN CONCEN- TRATION	DI SCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3 4	DISCHARGE (CFS) 230 170 190 215	MEAN CDNCEN- TRATION (MG/L) 280 370 298 445	DISCHARGE (TONS/DAY) 174 170 153 258	01SCHARGE (CFS) 400 344 270 306	4E AN CONCEN- TRATION (MG/L) 195 150 110	DISCHARGE (TONS/DAY) 211 139 80 91	DISCHARGE (CFS) 2300 2060 2090 2210	MEAN CONCEN- TRATION (MG/L) 135 125 160 176	01SCHARGE (TONS/DAY) 838 695 903 1050
1 2 3 4 5 6 7 8	01SCHARGE (CFS) 230 170 190 215 200 156 240 294 298	MEAN CDNCEN- TRATION (MG/L) 280 370 298 445 1020 1020 1440 1450 950	0 ISCHARGE (TONS/DAY) 174 170 153 258 551 430 933 1150 739	CISCHARGE (CFS) 400 344 270 306 688 1160 1500 1540 1350	ME AN CONCENTRATION (MG/L)  195 150 110 110 450 1700 2690 1540 830	DISCHARGE (TONS/DAY)  211 139 80 91 836 5320 10900 6400 3030	DISCHARGE (CFS) 2300 2060 2090 2210 2060 1500 1630 1810	MEAN CONCEN- TRATION (MG/L) 135 125 160 176 117 111 194 193	0ISCMARGE (TONS/DAY) 838 695 903 1050 651 450 810 943 684
1 2 3 4 5 6 7 8 9 10 11 12 13	DISCHARGE (CFS)  230 170 190 215 200  156 240 294 288 351 386 416 306 351	MEAN CDNCEN-TRATION (MG/L)  280 370 298 445 1020 1020 1440 1450 950 1170 620 550 450 480	DISCHARGE (TONS/DAY) 174 170 153 258 551 4 30 933 1150 739 1110 646 618 372 455	01SCHARGE (CFS) 400 344 270 306 688 1160 1500 1540 1080 1030 1030 1030 1030 1030	MEAN CONCENTRATION (MG/L)  195 150 110 110 450 1700 2690 1540 830 590 480 620 2300 2720	DISCHARGE (TONS/DAY)  211 139 80 91 836 5320 10900 6400 3030 1720 1400 2560 11300	DISCHARGE (CFS) 2300 2060 2090 2210 2060 1500 1630 1810 1720 1720 1720 1530 1450	MEAN CONCENTRATION (MG/L) 135 125 160 176 177 111 193 140 118 105 81 77 63 88 110 96 103	OISCHARGE (TONS/DAY)  838 695 903 1050 651 450 810 943 684 488 488 488 3355 301 253 301 253 366 505 511 595
1 2 3 4 5 5 6 7 7 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS) 230 170 190 215 200 156 240 294 288 351 386 416 306 351 351 324 448 400	MEAN CDNCENTRATION (MG/L)  280 370 298 445 1020 1020 1440 1450 950 1170 620 450 450 450 450 294 237 207 153	OISCHARGE (TONS/DAY)  174 170 153 258 551 430 933 1150 739 1110 646 618 372 455 714 279 207 250 165 130 97 92 72 60 73	CISCHARGE (CFS) 400 344 270 306 688 1160 1500 1540 1350 1080 1030 1530 1920 2060 22 90 2660 3300 3850 3990	HEAN CONCENTRATION (MG/L)  195 110 110 110 150 110 450 1700 2690 1540 860 620 2300 2720 2470 2470 2490 1680 1680 1680 1680 1680 1680 1680 168	DISCHARGE (TONS/DAY)  211 139 80 91 836 5320 10900 6400 3030 11720 1400 2540 11300 15100 17700 17700 17500 1400 5970 3190 2470 1860	OISCHARGE (CFS) 2300 2060 2090 2210 2060 1500 1630 1810 1810 1720 1720 1720 1730 1450 1450 1450 1450 1450 1450 1450 145	MEAN CONCENTRATION (MG/L) 135 125 160 176 177 111 194 193 140 118 105 181 77 63 88 110 6 103 98 600 57 666	OISCHARGE (TONS/DAY)  838 695 903 1050 651 450 810 943 684 488 488 488 335 3001 253 366 505 511 595 772 334 305 280 330
1 2 3 4 5 5 6 7 7 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS) 230 170 190 215 200 156 240 294 288 351 386 416 306 351 324 488 400 351 306 324 288 245	MEAN CDNCENTRATION (MG/L)  280 370 298 445 1020 1020 1440 1450 950 1170 620 450 480 580 294 237 207 153 137 105 92 90	OISCHARGE (TONS/DAY)  174 170 153 258 551 430 933 1150 739 1110 646 618 372 455 714 279 207 250 165 130 97 92 72 60	CISCHARGE (CFS) 400 344 270 306 688 1160 1590 1030 1030 1030 1030 1820 2080 2290 2600 3810 3850 3890 3810 3400 3320 3440 3170	#EAN CONCENTRATION (MG/L)  195 110 110 110 150 110 450 1700 2690 1540 860 2720 2470 2470 2490 1680 1680 1680 1680 1680 1680 1680 168	DISCHARGE (TONS/DAY)  211 139 80 91 836 5320 10900 6400 3030 11720 1400 2540 11300 15100 15200 17700 17500 1400 5970 3190 2690 2470	OISCHARGE (CFS) 2300 2060 2090 2060 1500 1630 1810 1810 18720 1720 1720 1720 1730 1450 1450 1450 1450 1450 1450 1460 1880 1880 1820	MEAN CONCENTRATION (MG/L) 135 125 160 176 117 111 193 140 118 105 105 106 103 88 106 103 98 60 60 57	OISCHARGE (TONS/DAY)  838 695 903 1050 651 450 810 943 684 488 488 488 335 301 253 366 505 511 595 572 334 305 280

# 09364500 ANIMAS RIVER AT FARMINGTON, N. MEX. -- Continued

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JULY			AUGUST		SEPTEMBER			
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
	1320	30	107	255	46	32	230	340	211	
1	1170	25	79	250	53	36	230	710	441	
2	1090	25	74		50	30	250	176	119	
4	1030			225			270	104	76	
5	1020	20	56	288	470	365	781	1450	4340	
,	1020	66	182	324	445	389	781	1450	4340	
6	1060	48	137	312	960	809	5650	8430	125000	
7	1140	432	1330	324	280	245	7690	2880	61600	
В	1 280	367	1580	379	270	276	3420	1440	13300	
9	1460	12600	56200	400	300	324	2330	700	4400	
10	1230	331	1100	358	274	265	1770	310	1480	
11	1140	249	766	312	100	84	1430	240	927	
12	1000	150	405	240	110	71	1350	420	1530	
13	855	97	224	210	49	28	1720	1140	6720	
14	801	66	143	180	67	33	5130	5490	76300	
15	720	66	128	175	41	19	4640	1090	13700	
16	688	82	152	200	54	29	3300	570	5080	
17	640	60	104	324	130	114	2580	390	2720	
18	576	39	61	496	330	442	2160	274	1600	
19	584	64	101	528	1550	2210	1840	217	1080	
20	608	166	273	772	6850	38300	1520	173	71.0	
21		255	386		20204		****		387	
21	560	255		979	20200	55900	1280	112		
22	544	320	470	696	1760	3310	1130	86	262	
23	632	305	520	560	490	741	1030	78	217	
24	616	148	246	520	370	519	954	79	203	
25	576	160	249	3 86	27 2	283	855	92	212	
26	536	78	113	330	188	168	774	77	161	
27	464	72	90	344	195	181	729	61	120	
28	448	57	69	324	143	125	696	50	94	
29	386	45	47	270	95	69	664	45	81	
30	312	43	36	230	63	39	624	44	74	
31	270	47	34	255	2220	1530				
TOTAL	24756		65462	11446		106966	57027		323145	
TOTAL	DISCHARGE F	OR YFAR (CF	S-DAYS)						306690	

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

306690 829780.9

# 09364500 ANIMAS RIVER AT FARMINGTON, N. MEX. -- Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVF; V, VISUAL ACCUMULATION TUBE; H, IN DISTILLED WATER)

		WATER								PART	ICLE :	SIZE					
		TEM-			SUSPENDED												METHOD
		PERA-		CONCEN-	SEDIMENT	PERC	ENT F.	INER '	THAN	THE S	1ZE (	IN MI	LLIME'	TERS)	IND	CATED	0F
		TURE	DI SCHAR GI	TRATION	DISCHARGE												ANALY-
	****		(CFS)	(MG/L)	(TONS/DAY)	-002	-004	- 008	-016	-031	-0.62	-125	-250	.500	1.00	2.00	SIS
DATE	TIME	( C)	(1173)	1110761	110,4370417			-000									
OCT 10, 196	9 1600	14.	774	958	2000	9	12		16		39	70	100				VPWC
DCT 23		10.	1310	4790	16900	30	46		63		80	91	99	100			VPWC
NOV 18		4.5	456	817	1010	35	47		62		69	76	93	100			VPWC
			276	694	51.7	7.3	88		97		99	100					SPWC
MAR 10, 197		6.		366	203	56	70		84		96	98	99	100			SPWC
APR 1	. 1630	6.	205	300	203	,,	,,,				,,		.,				
APR 7	. 1600	13.	260	2600	1830	66	79		96		100						PWC
MAY 7		15.	1640	2580	11400	11	16		28		81	99	100				VPWC
MAY 13		9.0	1640	24 30	10800	7	9		16		36	60	82	96	100		VPWC
		20.	2980	3580	28800	9	12		19		43	70	88	99	100		VPWC
MAY 16			1340	17200	62200	54	62		92		100						PWC
JUL 9	0800	19.	1340	11200	02200		0.										
JUL 20	. 1545	25.	568	2280	3500	50	68		95		100						PWC
AUG 21		20.0	950	2470D	63400	45	64		92		100						PWC
SEP 7			7850	2370	50200	26	36	44	53	64	78	90	97	100			VPMC
			7850	2370	50200	- 8	26	34	47	60	78	90	97	100			VPN
SEP 7		16.		1450	13500	16	21		36		67	87	96	100			VPWC
SEP 8	1000	12.	3440	1400	13300				,,,		٠.	٠.	,,	-20			
SEP 14	1630	17.	5490	4630	68600	27	37		57		77	90	97	100			VPMC

## 0936 5000 SAN JUAN RIVER AT FARMINGTON, N. MEX.

LCCATION (revised).—Lat 36°43'22", long 108°13'30", in SE<sup>1</sup><sub>4</sub> sec.17, T.29 N., R.13 W., San Juan County, at gaging station 4,000 ft downstream from Animas River, 1 mile west of Farmington, and at mile 97.4.

DRAINNGE AREA.—7,240 sq mi, approximately.

PERIOD OF RECORD.—-Chemical analyses: May 1962 to September 1970.

Water temperatures: June 1962 to September 1970.

EXTREMES.—1969-70:

Dissolved solids: Maximum, 1,720 mg/l Aug. 8; minimum, 162 mg/l May 16-26.

Hardness: Maximum, 565 mg/l Aug. 8, Sept. 12; minimum, 111 mg/l Feb. 10.

Specific conductance: Maximum daily, 2,290 micromhos Aug. 8; minimum daily, 264 micromhos May 22, 25.

Water temperatures: Maximum, 29.0°C July 31; minimum, freezing point on Jan. 2-6.

DATE	MEAN DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA1 (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATÉ (HCO3) (MS/L)
OCT.	1930	16		50		23			130
01-03 04	2630	14		62	7.6 6.2	44			178
05-21	2320	14		52	7.4	22			133
22	3830	18		102	7.8	171			268
23-31	2420	14		53	6.0	29			136
NOV. 01	2240	13		51	8.0	20			126
02	1390	ii		68	9.3	26			142
03-18	2010	13		51	7.0	22			126
19-20	1410	13		56	7.4	26			136
21-24 25-28	1870 1610	13 13		47	8.7	24 22			128 122
29-30	735	13		46 64	7.8 8.8	41			150
DEC.				• •					
01-02	1080	11		68	9.8	30			131
03-31	1690	13		46	7.5	21			120
JAN. 01-05	1870	13		38	5.1	18			103
06	1860			70	23	84			160
07-08	1280	14		43	6.4	26			113
09-28	1020	12		69	7.8	46			140
29-31 FEB.	2180	15		38	5.8	18			108
01-28 MAR.	2400	12		36	6.3	17			104
01-09	2340	13		40	6.1	19			111
10-26	1670	14		38	5.6	20			105
27-31	1210	13		40	6.6	27			103
APR.	1120			4.		20			100
01 02-30	703	14 12		41 60	6.0 6.2	28 <b>42</b>			125
MAY	105			50	0.1	72			
01-05	650	12		66	9.6	53			132
06-15	1997	8.0		53	6.1	20			125
16-26 27-31	4111 3076	6.1		38	4.4 3.9	9.8 12			92 88
JUNE	3010	6.4		40	3.9	12			80
01-04	2655	7.2		38	5.1	14			83
05-18	2284	8 - 2		42	9.2	19			104
19-21	2687	6.9		38	4.9	13			84
22-30 JULY	2298	6.9		39	5.5	15			85
01-02	1575	8.6	30	48	7.8	23		2.0	105
03-08	1360	9.2		56	7.9	27			120
09	2220	16		98	8.1	104			220
10-13	1608 865	9•2 11		55 62	6.6 B.4	24 33			117 136
14-31 AUG.	865	11		62	0.4	33			130
01-07	578	13		70	8.6	40			156
08	1720	27		192	21	332			264
09	915	13		80	7.9	96			206
10-16 17	550 1350	13 18		68 96	7.9 7.9	40 140			152 252
18-31	1115	13		62	7.7	36			144
SEP.									
01-05	792	13		63	8.0	38			144
06	8190 4148	14		70	8.6	70			204 117
07-12 13	4148 4170	8.5 13		5 L 95	5.6 6.8	18 111			200
14-30	3454	9.8		44	4.9	19			110
WTD. AVG. TIME WTD.		11		48	6.6	26			118
AVG.	1875	12		52	6.9	29			122
TONS PER DAY		55		244	33	130			597

## 09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX. -- Continued

Period of record:

Period of record:
Dissolved solids: Maximum, 1,720 mg/l Aug. 8, 1970; minimum, 103 mg/l May 11-15, 1962
Hardness: Maximum, 820 mg/l Aug. 6, 1968; minimum, 65 mg/l May 11-15, 1962.
Specific conductance: Maximum daily, 2,290 micromhos Aug. 8, 1970; minimum daily, 154 micromhos May 13, 1962.
Water temperatures: Maximum, 33.5°C July 6, 1967; minimum, freezing point on several days during December and January of most years.
REMARKS.—Daily chemical samples are collected by transversing the stream cross section. Bacteriological and macroinvertebrate analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

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DATE	CAR-BONATE	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS+ SOLVED CHLD- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	DIS_ SDLVED NITRATE (NO3) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED BDRON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)
OCT.									
01-03	0	89	4.6		. 25	1.1			
04	ő	125	8.3		.75	3.3			
05-21	ŏ	95	5.8		.36	1.6			
22	0	430	10		.00	• 0			
23-31	0	105	4.9		.43	1.9			
NOV.	0	93							
01 02	0	134	5.9 9.5		•32 •38	1.4			
03-18	ŏ	95	3.9		.36	1.6			
19-20	0	111	5.8		.38	1.7			
21-24	0	95	5.5		.36	1.6			
25-28	0	90	4.9		. 32	1.4			
29-30 DEC•	0	162	5.8		.43	1.9			
01-02	0	150	11		. 54	2.4			
03-31	ŏ	94	4.7		.09	.4			
JAN.						• •			
01-05	0	71	3.0		• 02	.1			
06	0	276	10		.18	. 8			
07-08 09-28	0	96 172	4.7 7.8		.05 .32	• 2			
29-31	0	68	3.5		• 27	1.4			==
FEB.	•	00	3.3		• 2 1	1.2			
01-28	0	68	3.3		.07	.3			
MAR.	_								
01-09 10-26	0	76 76	4.1		• 05	. 2			
27-31	0	104	2.6 3.0		•07 •07	.3			
APR.		104	3.0		.07	. 3			
01	0	101	3.0		.05	. 2			
02-30	0	152	6.1		-27	1.3			
MAY 01-05	0	101							
06-15	0	194 93	5.8 3.8		.29 .36	1.3			
16-26	Ö	54	3.0		.34	1.6 1.5			
27-31	ō	66	4.0		.18	.8			
JUNE						• •			
01-04 05-18	0	69 90	4.0		-41	1.8			
19-21	0	90 68	4.6 3.7		.25 .20	1.1			
22-30	0	74	4.7		.25	.9 1.1			
JULY	U	17	4. /		• 25	1.1			
01-02	0	102	6.3	• 3	.34	1.5		80	
03-08	0	118	7.5		.61	2.7			
09	0	308	6.0		. 09	• 4			
10-13 14-31	0	110 136	6.6 7.4		-38	1.7			
AUG.	U	136	7.4		.25	1.1			
01-07	0	155	11		.36	1.6			
08	0	1000	17						
09	0	252	13		.84	3.7			
10-16 17	0	157 354	5.9 10		•38	1.7			
18-31	Ö	138	8.0		•25 •27	1.1			
SEP.	Ü	130	0.0		• 21	1.2			
01-05	0	143	6.4		.00	.0			
06	0	200	6.2		.02	-1			
07-12	0	88	5.9		. 34	1.5			
13 14-30	0	330 76	9.6		- 05	• 5			
14.30	U	10	3.9		•02	.1			
WTD. AVG.	0	104	5.1		•22	-~			
TIME WID.									
AVG. TONS	0	114	5.6		• 24				
PER DAY	0	502	25		1.1				
	Ü	702	4,7						

09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.--Continued CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	DIS-						SPE-	
	SOLVED	DIS-	01S-		NON-	SODIUM	CIFIC	
	SOLIDS	SOLVED	SOLVED		CAR- BONATE	AD- SORP-	CON- DUCT-	
	(SUM OF	SOLIDS	SOLIDS	HARD- NESS	HARD-	TION	ANCE	PH
	CONSTI- TUENTS)	(TONS PER	(TONS PER	(CA,MG)	NESS	RATIO	(MICRO-	
DATE	(MG/L)	AC-FT)	DAY	(MG/L)	(MG/L)		MHOS )	(UNITS)
oct.								
01-03	255	•35	1330	156	50	.8	410	7.3
04	351	• 48	2490	180	34	1.4	551	7.6
05-21	263	.36	1650	160	51	.8	420	7.4
22	871	1.18	9010	288	68	4.4	1270	7.4
23-31	281	.3B	1840	157	46	1.0	455	7.5
NOV.		- 3,,	1010					,
01	254	.35	1540	160	56	.7	413	7.6
02	330	. 45	1240	208	92	.8	527	7.7
03-18	256	. 35	1390	156	52	.8	417	7.7
19-20	288	.39	1100	170	58	.9	459	7.6
21-24	258	• 35	1300	153	48	.8	413	7.6
25-28	245	• 33	1070	147	47	.8	398	7.7
29-30	370	• 50	734	196	73	1.3	580	7.7
DEC.								
01-02	346	. 47	1010	210	102	.9	499	7.8
03-31	246	• 33	1120	146	48	. B	395	7.2
JAN.						_		
01-05	199	- 27	1010	116	.32	.7	323	7.1
06	610	.83	3060	270	139	2.2	626 388	8.0
07-08 09-28	246 385	•33	850	134	42 90	1.0	592	7.4
29-31	202	•52 •27	1060	204 119	30 30	1.4	327	7.4 7.5
FEB.	202	• 21	1190	119	30	.7	321	1.0
01-28	194	• 26	1260	116	31	.7	319	7.3
MAR.	174	• 20	1260	110	31	• '	317	,.,
01-09	213	• 29	1350	125	34	.7	345	7.0
10-26	208	•29	938	118	32	. 8	335	7.4
27-31	245	.33	800	127	42	1.0	388	7.4
APR.	247	• 23	800	127	42	1.0	300	,
01	242	.33	732	127	45	1.1	393	7.3
02-30	340	• 46	645	175	72	1.4	537	7.6
MAY	340	• • • •	649	177	12	1.4	,,,,	7.0
01-05	407	• 55	714	204	96	1.6	635	7.7
06-15	246	.33	1330	157	54	•7	407	7.6
16-26	162	• 22	1800	113	38	.4	279	7.5
27-31	176	. 24	1460	116	44	.5	295	7.6
JUNE			2,00					
01-04	180	.24	1290	116	48	•6	307	7.3
05-18	225	.31	1390	143	58	• 7	377	7.5
19-21	176	• 24	1280	115	46	.5	303	7.5
22-30	188	.26	1170	120	50	.6	316	7.3
JULY								
01-02	252	.34	1070	152	66	.8	405	7.8
03-08	287	•39	1050	172	74	. 9	466	7.5
09	648	• B8	3880	278	98	2.7	953	7.5
10-13	271	- 37	1180	164	68	-8	443	7.4
14-31	326	.44	761	189	78	1.0	519	7.8
AUG.								
01-07	376	-51	587	210	81	1.2	587	8.0
08	1720	2.34	7990	565	348	6.1	2290	7.9
09	567	•77	1400	232	63	2.8	871	8.2
10-16	368 751	•50	546	202	78	1.2	589	7.7
17 18-31		1.02	2740	272	66	3.7	1080	7.5
SEP.	337	• 46	1020	186	68	1.2	533	7.9
01-05	342	. 47	731	190	72	1.2	529	7.8
	469				43		725	
06 07-12	236	• 64 • 32	10400 2640	210 150	54 54	2.1 .6	389	7.6 7.8
13	664	•90	7480	265	101	3.0	962	7.6
14-30	212	.29	1980	130	40	•7	358	7.9
14-70	212	• 29	1900	130	*0	• •	390	,.9
WTD. AVG.	268	• 36		148	51	.9	413	7.5
TIME WTO.		• 50		.40		• ,	723	,
AVG.	287	. 39		157	57	1.0	443	7.5
TONS								
PER DAY	1300							

# 0936 5000 SAN JUAN RIVER AT FARMINGTON, N. MEX.--Continued

DATE	TIME	CROSS SECTION LOC- ATION (FT)	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PD- TAS- SIUM (K) (MG/L)
0CT. 16 16 NDV.	0947 1116	60 20	2310 2310	8.6 12		59 36	8.9 6.0	23 22	2.0 1.7
18 18 DEC.	1531 1632	20 60	1940 1 <b>9</b> 40	11 12	==	38 52	6.0 8.8	26 28	2.2 2.4
11 11 JAN.	0921 1032	20 60	1720 1720	13 10	==	36 62	6.2 9.8	24 29	2.6
14 14 FEB.	1330 1445	60 20	1060 1060	7.8 9.7	==	82 63	12 9.3	34 44	3.0 2.5
10 10 MAR.	1510 1550	60 20	2390 2390	8.9 11		55 34	9.2 5.8	26 20	2.5 2.0
10 10	1310 1400	60 20	1880 1880	9.8 11	==	70 37	12 6.3	32 24	2.8 2.0
15 15	0830 0906	20 60	860 860	10 8.8	20 0	64 77	10 11	34 30	2.8 3.4
13 13 JUNE	0525 0645	20 60	2350 2350	6+8 5+9	==	44 40	6.2 5.8	18 11	1.6
10 10 JULY	08UC 0825	20 60	2190 2190	7.1 8.7	==	50 48	6.4	17 16	1.6 1.7
15 15 AUG.	0840 0915	60 20	923 923	7.3 7.8	0	58 58	8.1 8.0	25 28	2.3
12 12 SEP.	1040 1145	60 20	470 470	10 11	0 1700	78 60	11 8.0	38 42	3.3 2.6
08	1215 1330	20 60	4090 4090	7•3 7•1	o c	45 46	5.5 5.6	18 14	2 • 2 2 • 2
DATE	BICAR- BONATE (HCD3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SD4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRITE (N) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)
0CT. 16	BONATE (HCD3)	BONATE (CO3)	SOLVED SULFATE (SO4)	SOLVED CHLO- RIDE (CL)	SOLVED FLUO- RIDE (F)	SOLVED NITRITE (N)	NITRATE (N)	SOLVED NITRATE (NO3)	PHOS- PHORUS (P)
OCT. 16 16 NDV. 18	BONATE (HCD3) (MG/L)	BONATE (CO3) (MG/L)	SOLVED SULFATE (SO4) (MG/L)	SOLVED CHLO- RIDE (CL) (MG/L)	SOLVED FLUO- RIDE (F) (MG/L)	SOLVED NITRITE (N)	NITRATE (N) (MG/L)	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (P)
OCT. 16 16 NOV. 18 OEC. 11	BONATE (HCD3) (MG/L) 140 100	BONATE (CO3) (MG/L)	SOLVED SULFATE (SO4) (MG/L) 106 80 83	SOLVED CHLO- RIDE (CL) (MG/L) 8.1 2.6	SOLVED FLUO- RIDE (F) (MG/L)	SOLVED NITRITE (N) (MG/L)	NITRATE (N) (MG/L) .16 .11	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (P) (MG/L)
OCT. 16 16 NDV. 18 18 OEC. 11 JAN. 14	BONATE (HCD3) (MG/L) 140 100 101 124	BONATE (CO3) (MG/L)	SOLVED SULFATE (SD4) (MG/L) 176 80 83 108	SOLVED CHLO- RIDE (CL) (MG/L) 8.1 2.6 3.0 7.5	SOLVED FLUO- RIDE (F) (MG/L)	SOLVED NITRITE (N) (MG/L)	NITRATE (N) (MG/L) .16 .11 .00 .00	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (P) (MG/L)
OCT. 16 16 NDV. 18 18 DEC. 11 JAN. 14 FEB. 10	BONATE (HCD3) (MG/L) 140 100 101 124 100 139	BONATE (CO3) (MG/L)	SOLVED SULFATE (SD4) (MG/L) 176 80 83 108 86 120	SOLVED CHLD- RIDE (CL) (MG/L) 8.1 2.6 3.0 7.5 2.6	SOLVED FLUO- RIDE (F) (MG/L) -4 -2 -3 -4 -2 -3	SOLVED NITRITE (N) (MG/L)	NITRATE (N) (MG/L)  .16 .11 .00 .00 .16 .59	SOLVED NITRATE (NO3) (MG/L) .7 .5 .0 .0 .7 .2.6	PHDS- PHORUS (P) (MG/L)
OCT. 16 16 NOV. 18 18 OEC. 11 14 14 14 14 MAR. 10	BONATE (HCD3) (MG/L) 140 100 101 124 100 139 164 135	BONATE (CO3) (MG/L)	SOLVED SULFATE (SD4) (MG/L) 106 80 83 108 86 120 158 162	SOLVED CHLO- RIDE (CL) (MG/L) 8.1 2.6 3.0 7.5 2.6 10	SOLVED FLUO- RIDE (F) (MG/L) -4 -2 -3 -4 -2 -3	SOLVED NITRITE (N) (MG/L)	NITRATE (N) (MG/L) .16 .11 .00 .00 .16 .59 .99 .86 .47	SOLVED NITRATE (NO3) (MG/L) .7 .5 .0 .0 .7 2.6 4.4 3.8	PHOS- PHORUS (P) (MG/L)
OCT. 16 16 NOV. 18 18 OEC. 11 JAN. 14 14 FEB 10 10 AAR. 10 10 10 10 11 11 11 11 11 11 11 11	BONATE (HCO3) (MG/L) 140 100 101 124 100 139 164 135 130 100	BOMATE (CO3) (MG/L) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SOLVED SULFATE (SD4) (MG/L) 106 80 83 108 86 120 158 162 110 66	SOLVED CHLO- RIDE (CL) (MG/L) (MG/L) 8.1 2.6 3.0 7.5 2.6 10 16 6.2 11 2.8 13	SOLVED FLUD- RIDE (F) (MG/L) -4 -2 -3 -4 -2 -3 -6	SOLVED NITRITE (N) (MG/L)	NITRATE (N) (MG/L) (MG/L) .16 .11 .00 .00 .16 .59 .99 .86 .47 .14 .52	SOLVED NITRATE (NO3) (MG/L) .7 .5 .0 .0 .7 2.6 4.4 3.8 2.1 .6	PHOS- PHORU (P) (MG/L)
OCT. 16 16 16 16 18 18 18 18 11 11 14 14 14 10 10 10 APR. 10 15 MAY 13 13	BONATE (HC03) (HG/L) 140 100 101 124 100 139 164 135 13C 10C	BONATE (CO3) (MG/L) (CO3) (CO3	SOLVED SULFATE (SO4) (MG/L) 176 80 108 86 120 158 162 110 66 136 78	SOLVED CHLOP- RIDE (CL) (MG/L) 8.1 2.6 3.0 7.5 2.6 10 16 6.2 11 2.8 13 3.0 8.9	SOLVED FLUD- FLUD- FLUDE (F) (MG/L) -4 -2 -3 -4 -2 -3 -4 -2 -3 -4 -2 -3 -3 -4 -2 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3 -3	SOLVED NITRITE (N) (MG/L) (MG/L)	NITRATE (N) (MG/L)	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (P) (MG/L)
OCT. 16 NOV. 18 18 DEC. 11 JAN. 14 14 14 16 10 MAR. 10 10 15 May 13 13 13 13 13 13 13 10	BONATE (HC03) (HG/L) 140 100 101 124 100 139 164 135 135 100 152 104	BONATE (CO3) (MG/L) (CO3) (CO3	SOLVED SULFATE (SO4) (MG/L) 176 80 83 108 86 120 158 162 110 66 136 78	SOLVED CHLD- RIDE (CL) (MG/L) 8.1 2.6 3.0 7.5 2.6 10 16 6.2 11 2.8 13 3.0 8.9 14	SOLVED FLUD- FLUD- FLUD- (F) (MG/L) -4 -2 -3 -4 -2 -3 -7 -6 -4 -4 -3 -4 -3 -3 -3	SOLVED NITRITE (N) (N) (MG/L)	NITRATE (N) (MG/L)  .16 .11 .00 .00 .16 .59 .99 .86 .47 .14 .52 .18 .29 .50 .36	SOLVED NITRATE (NO3) (MG/L) 750 -0 -0 -7 -2 -6 -4 -4 -4 -3 -8 -2 -1 -6 -8 -8 -1 -3 -2 -2 -1 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6	PHOS- PHORUS (P) (MG/L)
OCT. 16 16 18 18 0EC. 11 14 14 14 14 16 10 10 10 13	BONATE (HC03) (HG/L) 140 100 101 124 100 139 164 135 10C 152 104 164 164 160 160 175 164 166 166 166 166 166 166 166 166 166	BOMATE (CO3) (MG/L) (CO3) (CO3	SOLVED SULFATE (SO4) (MG/L) 106 80 83 108 86 120 158 160 136 78 146 141 83 66	SOLVEO CHLO-RIDE (CLL) (MG/L)	SOLVED FLUO- RIDE (F) (MG/L) -4 -2 -3 -4 -2 -3 -7 -6 -6 -4 -2 -3 -3 -3 -3 -3 -3 -3 -3	SOLVED NITRITE (N) (N) (MG/L)	NITRATE (N) (MG/L)  .16 .11 .00 .00 .00 .00 .16 .59 .99 .86 .47 .14 .52 .18 .29 .50 .36 .45 .45 .38	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (P) (MG/L)
OCT. 16 16 NOV. 18 18 DEC. 11 JAN. 14 14 14 14 15 MAR. 10 MAP. 15 MAP. 10 JUNE JUNE JULY 15 JULY	BONATE (HCO3) (HG/L) 140 100 111 124 100 1139 105 105 105 106 115 106 115 106 115 115 115 115 115 115 115 115 115 11	BOMATE (CO3) (MG/L) (CO3) (CO3	SOLVED SULFATE (SO4) (MG/L) 176 80 83 108 86 120 158 162 110 66 136 78 146 141 83 66 87 82	SOLVEO CHLO-RIDE (CL) (MG/L) (MG/L) (MG/L) (CL) (MG/L) (MG/L) (MG/L) (CL) (MG/L) (MG/L	SOLVED FLUO- RIDE (F) (MG/L) -4 -2 -3 -3 -7 -6 -4 -2 -4 -3 -3 -3 -3 -3 -3 -4 -4 -4	SOLVED NITRITE (N) (N) (MG/L)	NITRATE (N) (MG/L)  .16 .11 .00 .00 .00 .01 .59 .99 .86 .47 .14 .52 .18 .29 .50 .36 .45 .38 .50 .61	SOLVED NITRATE (NO3) (MG/L) 7. 5. 6. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	PHOS- PHORUS (P) (MG/L)

# 09365000 SAN JUAN RIVER AT FARMINGTON, N. MEX.--Continued

DATE	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SDLIOS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPE- CIFIC CON- DUCT- ANCE [MICRO- MHOS]	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.									
16		299	286	185	70	.7			9.5
16		214	210	114	32	• 9			9.5
NOV.									
18	~-	220	220	118	35	1.0		7.6	6.C
18		278	280	167	66	.9		7.2	5.5
DEC.		220	222						
11		229 327	270 314	118 198	36 84	1.0			2.0
JAN.		321	314	198	54	• 9			2.0
14		403	399	256	122	.9			3.8
14		371	367	196	86	1.4			5.0
FEB.		3.1	50.	1,0		•••			,,,
10		298	289	181	74	.8			9.0
1C		197	191	111	29	• 8			8.0
MAR.									
1C		365	353	216	92	. 9			7.9
10		218	213	118	33	1.0			6.6
APR.									
15	110	35C	349	203	85	1.0		7.6	4.7
15 May	150	377	370	224	90	. 9	575	7.6	5.8
13		237	216	133	48	.7			9.2
13		200	185	124	42	:4	308		9.8
JUNE		2011	103	124	72	•••	306		,,,
10		236	229	140	52	•6	363	7.6	10.5
10		225	223	136	49	.6	346	7.6	10.5
JULY									
15	60	30%	286	182	79	.8			19.0
15	5C	306	294	180	77	. 9			19-5
AUG.									
12		426	407	246	104	1.1		8.2	22.5
12		369	342	182	86	1.4			23.0
SEP. 08		239	222	110	57	.7			13.5
08		239 222	212	139 139	56	.,			14.0
****		227	212	139	30	• • •			14.0

FIELD AND BIOCHEMICAL DETERMINATIONS

DAT E	TIME	CROSS SECTION LOC- ATION (FT)	DIS- CHARGE (CFS)	SPEC I- FIC CONO- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)
OCT.								
16	0947	60	2310	470	8.3	9.5		
16 NOV.	1116	20	2310	340	8. 6	9. 5		
18	1530	20	1940	337		6.0		
18	1630	60	1940	426		5.5		
DEC.								
11	0920	20	1720	350	8.3	2.0		
11	1030	6 <b>0</b>	1720	525	B <sub>e</sub> 3	2.0		
JAN.								
14	1330	60	1060	640	8.7	3.8		5
14	1445	20	1060	570	8.6	5. 0		5
FEB.						9. 0		3
10	1510	60	2390	480	7.9 8.2	9 <sub>0</sub> 0		5
10 MAR.	1550	20	2390	322	0.2	De U		,
10	1310	60	1880	575	8. 1	7. 9		3
10	1400	20	1880	355	8.3	6.6	6.1	7
APR.	1400	20	1000	333	0.0	0.0		•
15	0830	20	860	540		4.7		12
15.00	0900	60	860	575		5.8		7
MAY	0,00	•••	000			- • •		
13	0525	20	2350	358	8.4	9.2	6.2	15
13	0645	60	2350	3 0 8	8.2	9.8	4.5	20
JUNE								
10	0800	20	2190			10.5	12.0	5
10	0825	60	2190			10.5	17.0	15
JUL Y								_
15	0840	60	923	465	8. 2	19.0	27.5	3
15	0915	20	923	460	8.3	19.5	27.5	3
AUG.								
12	1040	60	470	615	8.2	22. 5	30.5	5
12	1145	2 <b>0</b>	470	530	8.2	23.0	31.0	,
SEP.		20		380	8.2	13.5	25.0	8
08	1215 1330	20 60	4090	360	8.1	14.0	25.5	10
V8	1330	60	4090	360	0.1	14.0	29.0	10

# 0936 5000 SAN JUAN RIVER AT FARMINGTON, N. MEX. -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

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FIFID	TIMA	RINCHEMICAL	DETERMINATIONS

			CHEM-		FF6.44	I MME-	67050
			ICAL	B10~	FECAL	DIATE	STREP-
	****		DXYGEN	CHEM-	CDLI-	COL I-	TOCOCCI
	TUR-	DIS-	DEMAND	ICAL	FORM	FORM	(COL-
	BID-	SDLVED	( LOW	OXY GEN	(COL.	(CDL.	ONTES
	ITY	OXYGEN	LE VEL )	DEMAND	PER	PER	PER
DATE	(JTU)	(MG/L)	(MG/L)	(MG/L)	100 ML)	100 ML)	100 ML)
OCT.							
16		9.5	8	1.6	15600	E113000	4000
16		9.4	12	. 8	<100	E1000	<10
NOV.				••	1200		
18		10.5	3	. 6	100	<10000	<10
18		10.5	12	1.2	11000	<1D0000	30
DEC.		,	••	•••	11000	(100000	,,,
11		11.2	16	3.3	300	10000	20
11		12.0	16	• 4	<100	34000	230
JAN.				•			
14		11.7	7	3, 0	98800	400000	280
14		10.9	15	1.0	700	<10000	<10
FEB.							
10		10.8	15	2.4	6340	360000	430
10		10.3	9	2.0	20	100	10
MAR.							
10	70	9.8	9	4.7	<100	<100000	300
10	38	10.0	21	2.0	<100	<10000	<10
APR.							
15	105	10.6	16	3.1	660	6700	120
15	125	10.9	8	5.6	9520	37400	300
MAY							
13	188	8.8	8	2.4	1800	27000	50
13	200	9.0	7	3.0	39600	2 90000	180
JUNE							
10	80	8.9	16	2.8	8900	30000	3300
10	64	9.0	9	2.8	14800	3 00000	1800
JULY							
15	29	7.5	6	2.9	420	>420	60
15	36	7.5	7	1.9	620	800	30
AUG.							
12	100	7. D	6	4.9	36800	1100000	180
12	300	6.8	6	1.4	<100	40000	30
SEP.							
08	350	8.5	12	• 8	<100	70000	100
08	300	8.2	12	1.3	100	100000	900

E ESTIMATED.

## MACROINVERTEBRATE ANALYSIS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

AUG. 12, 1970 - COLLECTED BY SURBER SAMPLER (3 SQ FT)

ORGANISM AND CLASSIFICATION	NUMBER
DIPTERA	
CHIRONOMIDAE (TANYPODINAE)	2
TIPULIDAE	1
EPHEMEROPTERA	
BAETIDAE EPHEMERELLA SP.	3
OTHER	5
HEPTAGENI IDAE	2
TRICHOPTERA	
HYDROPSYCHIDAE	46
PLECOPTERA	1
COLEOPTERA	
ELMIDAE LARVAE	1
TOTAL NUMBER OF ORGANISMS	61
TOTAL BIOMASS (GRAMS)	~~ 0.76

COMMON NAME FOR PRECEDING ORDERS: DIPTERA - FLIES, MOSQUITOES, MIDGES EPHEMERGOPIERA - MAYELIES TRICHOPIERA - CADDIS FLIES PLECOPIERA - STOME FLIES COLEOPIERA - BEETLES 30 31

AVG

AVG

11.5

7.5

4.5

2.5

6.0

482

460

428

400

519

0936 5000 SAN JUAN RIVER AT FARMINGTON, N. MEX. -- Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

CAY OC T NOV DEC FEB APR JUN AUG " SEP JAN MAR MAY JUŁ 413 527 456 406 570 438 385 302 356 290 351 374 383 371 393 508 501 639 646 653 524 515 521 459 1 442 394 315 280 403 417 310 405 302 663 592 485 5 551 403 299 293 483 315 419 290 305 489 450 609 572 6 293 345 292 343 471 615 595 725 460 406 396 828 300 486 504 359 491 495 489 508 463 432 404 382 379 372 496 434 953 439 372 407 361 378 437 403 359 353 8 417 425 332 399 482 2290 871 402 639 300 402 10 420 430 331 471 591 406 11 12 13 575 593 589 594 405 429 432 394 405 385 535 594 567 355 354 301 504 503 501 476 357 361 355 347 419 397 392 334 402 397 328 402 395 449 479 460 962 14 15 562 301 515 484 395 384 494 493 400 409 385 380 407 321 590 16 17 18 19 413 417 411 477 385 376 378 293 293 339 513 555 310 582 315 496 314 364 492 420 477 356 340 316 519 537 519 319 590 571 1080 330 350 628 268 569 544 408 385 645 319 551 535 268 289 20 410 439 402 523 575 382 393 422 345 571 291 358 344 327 532 523 515 522 596 282 296 521 616 393 21 22 23 24 25 410 400 411 579 579 264 278 322 523 519 541 513 1270 414 350 351 379 373 487 4C1 5 82 291 319 268 305 49A 507 370 498 390 406 306 462 369 616 356 316 26 27 28 29 368 359 421 593 395 398 392 415 410 338 653 654 608 317 314 314 323 522 530 550 529 606 609 351 393 390 374 379 410 275 282 279 295 315 309 621 324 359 294 342 516 514 413 394 396 580 AOR 372

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

346

317

628

531

383

530 538

506

341

342

504 532

435

DAY CCT NOV DEC . I AN FFA MAR ADD MAY JUN JUL AUG SEP 20.0 17.0 11.0 4.0 5.0 1.0 0.0 0.0 4.0 6.0 10.0 8.0 13.0 9.0 20.0 22.0 25.0 20.0 18.0 18.0 20.0 24.0 25.0 23.0 8.0 8.D 8.0 18.0 9.0 6.0 6.0 5.0 10.0 11.0 12.0 8.0 18.0 19.0 2.0 8.0 18.0 10.0 0.0 3.0 10.0 26.0 10.0 11.0 17.0 13.0 10.0 5.0 0.0 10.0 20.0 12.0 20.0 25.0 14.0 9.0 3.0 4.0 4.0 1.0 2.0 4.0 8.0 13.0 20.0 23.0 19.0 16.0 16.0 17.0 10.0 11.0 28.0 10.0 15.0 8 9 10 14.0 10.0 10.0 22.0 8.0 4.0 5.0 8.0 15.0 15.0 12.0 23.0 25.0 16.0 11 12 13 10.0 16.0 11.0 12.0 3.0 2.0 1.0 3.0 9.0 7.0 10.0 9.0 17.0 8.0 22.0 23.0 25.0 25.0 27.0 25.0 18.0 3.0 8.0 8.0 10.0 11.0 11.0 14.0 11.0 12.0 19.0 20.0 20.0 23.0 26.0 23.0 10.0 18.0 16.0 14 12.0 8.0 2.0 3.0 25.0 20.0 14.0 9.0 9.0 16 17 10.0 8.0 5.0 3.0 8.0 10.0 20.0 20.0 21.0 25.0 20.0 15.0 5.0 10.0 4.0 3.0 25.0 25.0 25.0 25.0 25.0 25.0 6.0 5.0 10.0 20.0 14.0 15.0 18 3.0 3.0 3.0 6.0 22.0 19.0 20.0 11.0 5.0 5.0 20 13.0 17.0 10.0 25.0 8.0 9.0 18.0 20.0 23.0 21 22 13.0 5.0 7.0 6.0 3.0 9.0 8.C 14.0 14.0 20.0 24.0 17.0 11.0 10.0 8.0 9.0 5.0 5.0 5.0 14.0 15.0 16.0 18.0 24.0 22.0 22.0 22.0 6.0 3.0 10.0 17.0 17.0 20.0 20.0 15.0 6.0 7.0 8.0 3.0 4.0 5.0 13.0 9.0 8.0 18.0 19.0 20.0 6.0 5.0 23.0 23 13.0 25.0 15.0 6.0 6.0 20.0 18.0 15.0 12.0 13.0 20.0 23.0 24.0 26.0 25.0 25.0 25.0 21.0 23.0 25.0 9.0 10.0 11.0 5.0 5.0 3.0 3.0 26 27 28 29 30 31 7.0 7.0 7.0 10.0 9.0 11.0 21.0 19.0 20.0 ---6.0 7.0 7.0 5.0 9.0 5.0 6.0 5.0 5.0 14.0 8.0 5.0 4.0 ---5.0 20.0 26.0 5.0 3.0 20.0 18.0 6.C 15.0

8.5

12.5

16.0

16.5

23.0

24.0

17.5

## 09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION. -- Lat 36°59'59", long 108°11'17", in NW SE sec. 10, T. 32 N., R.13 W., La Plata County, Colorado, at gaging station at Colorado-New Mexico State line, 0.2 mile downstream from Ponds Arroyo and 4.8 miles north of La Plata, N. Mex.

DRAINAGE AREA. -- 331 sq mi.

PERIOD OF RECORD. -- Chemical analyses: August 1969 to September 1970.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOL VED SODIUM (NA) (MG/L)	DIS- SOLVED PD- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONA TE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
AUG 1969									
27 SEP.		5.6	96	68	40	4.4	191		388
11 DEC.		30	83	42	27	2.0	175		261
19 MAR 1970	1455	7. 2	128	97	44	2.0	263	0	518
31	1605	7.D	145	76	56	2.2	254	0	535
MAY 13	1530	92	54	25	15	2.0	147	0	145
DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM DF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SDDIUM AD- SORP- TION RATIO	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
AUG 1969 27	19	764			326	.8	1020	8.5	24.0
SEP.						-			
DEC.	14	570		382	218	•6	785	8.5	13.0
19	27	1100	945	720	504	.7	1340	8.1	6.0
MAR 1970 31	26	1080	965	<b>67</b> 6	468	• 9	1330	8.1	10.0
MAY 13	5.8	345	317	238	122	.4	501	7.5	17.0

#### FIELD AND BIOCHEMICAL DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMPER- ATURE (DEG C)	OIS- SOLVED DXYGEN (MG/L)
SEP. 11	0830	23	810	8.1	16.0	20.0	10.0

# 09367500 LA PLATA RIVER NEAR FARMINGTON, N. MEX.

LOCATION. --Lat 36°44'23", long 108°14'51", in SW\( 2 \) sec. 7, T. 29 N., R. 13 W., San Juan County, at gaging station 1,300 ft upstream from bridge on U.S. Highway 550, 1,800 ft upstream from mouth, and 2.5 miles northwest of Parmington.

DRAINAGE AREA. -- 583 sq mi.

PERIOD OF RECORD, -- Chemical analyses: August to September 1970.

REMARKS. -- Bacteriological analyses of samples collected by the U.S. Geological Survey are furnished by the New Mexico Environmental Improvement Agency.

FIELD AND BIOCHEMICAL MEASUREMENTS, AUGUST TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	AIR TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	- AUT - CIB - CIU	FECAL CDLI- FORM (COL. PER 100 ML)	IMME- DIATE CDLI- FORM (COL- PER 100 ML)	STREP- TOCOCCI (CDL- ONIES PER 100 ML)
AUG. 11	1640	2.4	2000	30.0	34.5	4	23	<10	100	<10
SEP. 09	1145	30	1500	18.5		7	250	10	100	80

## 09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX.

COCATION (revised).--Lat 36°47'52", long 108°43'52", in SW4 sec.22, T.30 N., RA. R.18 W., San Juan County, at gaging station 3 miles west of Shiprock, 6 miles downstream from Chaco River, and at river mile 61.0. DRAINAGE AREA.--12,900 sq mi, approximately.

PRRIOD OF RECORD.--Chemical analyses: February 1941 to September 1945, July 1957 to September 1970.

Water temperatures: December 1950 to September 1970.

Sediment records: December 1950 to September 1970.

EXTREMES.--1969-70:
Dissolved solids: Maximum, 1,290 mg/l Aug. 9; minimum, 174 mg/l May 21-31.

Hardness: Maximum, 600 mg/l Sept. 5; minimum, 124 mg/l May 21-31.

Specific conductance: Maximum daily, 1,890 micromhos Aug. 9; minimum daily, 274 micromhos May 20.

Water temperatures: Maximum, 30.0°C July 15; minimum, freezing point on several days during December and January.

January.

Sediment concentrations: Maximum daily, 52,200 mg/l Oct. 22; minimum daily, 78 mg/l Aug. 2.

DATE	MEAN DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED IRDN (FE) (UG/L)	DIS- SOLVED CAL- CTUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MS) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCG3) (MG/L)
OCT.									
01-02	1560 3150	13		58 102	12 23		34 63		138 180
03-04 05-21	2550	15 13		55	11		33		137
22-23	9900	19		62	7.2		182		236
24-31	2760	14		59	11		44		148
NDV. 01-02	2040	13		58	8.6		37		144
03	1590	14		82	15		63		176
04-18	2340	12		56	8.4		37		130 142
19-20	1680 1960	13		67 57	12 9.2		55 39		129
21-28 29-30	1200	13 12		75	14		42		152
DEC.									
01	967 1260	13		82	16		59 50		166 146
02	1880	14 13		71 57	13 11		39		129
10-11	1800	14		45	8.6		39		88
12-31	1800	13		53	9.7		39		119
JAN. 01-07	1704	9.2		50	10		30		123
08-28	1024	14		61	16		60		87
29	1710	3.6		48	12		46		99
30-31	2815	5.8		35	8.5		25		82
FEB. 01-28	2475	8.2		44	8.3		26		106
MAR.	2422				9.0		32		120
01-09 10-26	1660	8.6 9.9		4 <b>4</b> 49	8.9	-	31		119
27-31	1238	8.9		60	12		45		127
APR.									
01 02-19	1120 758	9.1 8.9		62 75	13 15	54	43	2.2	132 152
20-27	525	8.7		82	22		54		164
28-30	471	8.2		79	15		50		158
MAY	490						61		167
01-05 06-07	1045	8.2 10		87 71	18 12		32		143
08-12	1444	8.3		62	8.9		27		126
13-16	2730 4132	8.3		52	6.9		16		107 97
17-20 21-31	3038	7.4 6.1		42 40	5.1 5.8		11 8.0		84
JUNE 21-31	3030	8.1		40	J.0		0.0		
01-06	2520	6.8		44	5.8		19		92
07-19	2143 1946	8.2		57	7.3 5.8		28 22		116 91
20-30 JULY	1940	6.8		46	5.8		22		71
01-08	1227	8.0	10	65	8.5	3.5		2.2	123
09	2120 1398	12		90	9.6		48 37		168 129
10-14 15-28	707	9.1 9.4		65 79	8.0 12		52		157
29-31	464	8.1		90	14		58		169
AUG.	309						69		172
01-03 04-06	309	12 12		95 114	18 17		117		204
07-08	676	13		95	14		72		184
09	1010	13		176	16		223		280
10-17	451 870	12		95	15 10		84 156		189 262
18	1320	12 15		124 91	11		63		184
23-31	780	12		87	12		45		159
SEP.	41.			00			59		159
01-04	616 1650	14 11		90 202	12 23		106		166
05 06	8470	12		114	6.7		142		204
07	11300	14		62	6.2		41		162 123
08-13	3370 6810	13		64 100	6.0 14		30 58		170
14 15-30	2890	13 12	==	56	5.0		27		117
							41		129
WTD. AVG. TIME WTD.		11		58	9.1		41		
AVG.	1887	11		63	11		41		130
TONS PER DAY		58		309	49		229		685
FER ON!	_	20		303					

## 09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX .-- Continued

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EXTREMES.--1969-70:--Continued
Sediment discharge: Maximum daily, 1,730,000 tons Oct. 22; minimum daily, 62 tons Aug. 2.

Sediment discharge: Maximum daily, 1,730,000 tons Oct. 22; minimum daily, 62 tons Aug. 2.

Period of record:
Dissolved solids: Maximum, 2,980 mg/l July 30-31, 1959; minimum, 115 mg/l June 21-28, 30, 1944.

Hardness: Maximum, 1,100 mg/l July 30-31, 1959; minimum, 70 mg/l June 21-28, 30, 1944.

Specific conductance (1857-70): Maximum daily, 4,360 micromhos July 31, 1959; minimum daily, 188 micromhos June 8, 1958.

Water temperatures: Maximum, 34.0°C July 20, 1968; minimum, freezing point on many days during winter periods. Sediment concentrations: Maximum daily, 114,000 mg/l Aug. 11, 1967; minimum daily, 2 mg/l May 4, 1963.

Sediment discharge: Maximum daily, 2,000,000 tons Aug. 11, 1967; minimum daily, 1 ton on several days during July and September 1959, September 1962, May and July 1963.

REMARKS.—Bacteriological and macroinvertebrate analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	СН	EMICAL ANA	ALYSES, W	ATER YEAR	OCTOBER	1969 TO SE	PTEMBER :	1970	
DATE	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVEO BORDN (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)
0CT.									
01-02	0	135	8.3	. 3	.50	2.2			
03-04	ō	296	15	.4	1.8	8.1			
05-21	D	123	7.6	.3	. 45	2.0			
22-23 24-31	0	344 146	12 7•6	.7	1.3	5.7 2.9			
NOV.	J	140	***	• 4	. 05	2.7			
01-02	0	123	10	• 2	.23	1.0			
03	0	226	16	. 2	- 68	3.0			
04-18 19-20	0	125 188	11 14	.3	.47 .68	2.1 3.0			
21-28	0	134	12	• 3	. 45	2.0			
29-30	0	176	17	.3	. 75	3.3			
DEC. 01	0	224	18	•3	.79	3.5			
02	ő	188	14	• 3	. 79	3.5			
03-09	0	140	12	.3	.50	2.2			
10-11 12-31	0	137 134	12	• 2	•02	.1			
JAN.	U	134	13	• 4	• 29	1.3			
01-07	0	119	5.4	.4	.16	.7			
08-28	0	242	15	. 4	- 18	. 8			
29 30-31	0	166 100	8.9	• 4 • 4	.00	.0			
FEB.	U	100	6.1	• 4	•00	• 0			
01-28	0	99	6.5	.3	.23	1.0			
MAR.	_		<b>.</b> .						
01-09 10-26	0	99 115	5.9 6.0	.4	.29 .34	1.3 1.5			
27-31	ŏ	164	12	:4	.61	2.7			
APR.									
01 02-19	0	177 212	6.0 12	.4	.56 .84	2.5 3.7		80	
20-27	ŏ	246	13	.4	.93	4.1			
28-30	Ó	212	10	.4	1.0	4.6			
MAY 01-05	0	264				4.5			
06-07	0	164	5.2 3.0	• 4 • 4	1.0 .90	4.0			
08-12	ŏ	128	7.4	- 4	.72	3.2			
13-16	0	88	7.0	.3	.54	2.4			
17-20 21-31	0	62 66	2.8 5.5	.3	.38	1.7 1.2			
JUNE	U	80	2.2	• • •	•21	2			
01-06	0	88	4.2	•2	-32	1.4			
07-19	0	120	6.7	.3	. 43	1.9 1.5			
20-30 JULY	0	98	6.0	•2	. 34	1.3			
01-08	0	152	7.2		.50	2.2		0	
09	0	206	8.9	.4	- 54	2.4			
10-14 15-28	0	148 203	8.8 13	.3	•54 •72	2.4 3.2			
29-31	ő	240	12	.4	.81	3.6			
AUG.									
01-03 04-06	0	273 378	22 27	•5	1.2	5.3 8.4			
07-08	ŏ	258	18	• 7 • 6	1.4	6.3			
09	o	702	18	.7	.38	1.7			
10-17	0	288	16	•6	1.1	4.7			
18 19-22	0	435 227	16 14	.6 .6	•11 •27	.5 1.2			
23-31	ŏ	204	14	.6	.41	1.8			
SEP.									
01-04 05	4	229 546	16 86	.5 .6	.47 1.2	2.1 5.2			
06	0	407	19	-7	. 16	.7			
07	0	120	6.4	. (	.29	1.3			
08-13 14	0	130 259	7.7 16	.5	.20 .11	.9			
15-30	o o	106	7.4	.1	.16	.7			
WTD. AVG. TIME WTD.	0	145	9.0	.4	• 42				
AVG.	0	160	10	. 4	• 48				
TONS PER DAY	0	772	48	1.9	2.2				

# 09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX. -- Continued

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOL VED SOL IDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)
OCT.								
01-02	331	. 45	1390	194	81	1.1	527	8.0
03-04 05-21	612 312	.83 .42	5210 2150	348 181	200 68	1.5 1.1	895 <b>49</b> 6	7.9 7.6
22-23	749	1.02	20000	184	ő	5.9	1110	7.9
24-31	358	.49	2670	192	71	1.4	560	7.5
NOV.			20.0					
01-02	322	.44	1770	180	62	1.2	489	7.5
03	506	. 69	2170	268	124	1.7	747	7.6
04-18 19-20	316 422	•43	2000 1910	174 216	68 100	1.2	493 617	7.8
21-28	330	•57 •45	1750	180	74	1.6	507	7.6 7.7
29-30	415	.56	1350	244	120	1.2	678	7.8
DEC.			••••					
01	498	. 68	1300	270	134	1.6	758	7.8
02	426	- 58	1450	230	110	1.4	652	7.9
03-09 10-11	338 299	•46 •41	1720 1450	186 148	80 76	1.2 1.4	522 461	7.6 8.0
12-31	322	.44	1570	172	74	1.3	499	7.9
JAN.	,,,,	• • •					***	
01-07	285	.39	1310	168	67	1.0	468	7.5
08-28	452	.61	1250	216	144	1.8	689	7.8
29	334	. 45		168	87	1.5	536	7.8
30-31	222	.30	1690	125	58	1.0	376	7.8
FE8. 01-28	245	. 33	1640	144	57	.9	400	8.1
MAR. 01-09	258	25		143	44	1.1	405	7.9
10-26	281	.35 .38		159	62	1.1	450	7,9
27-31	367	.50	1230	197	93	1.4	573	7.9
APR.								
01	378	.51	1140	210	102	1.3	604	7.8
02-19	458	.62	937	248	124	1.5	700	7.8
20-27 28-30	511 457	.69 .62	724 581	296 260	162 130	1.4	788 709	8.0 7.7
MAY	451	•62	281	260	150	1.5	109	
01-05	530	•72	701	292	155	1.6	841	7.9
06-07	366	• 50	1030	226	109	.9	607	7.5
08-12	307	• 42	1200	191	88	.9	507	7.6
13-16 17-20	234 180	.32	2010	158 126	70 46	.5	396 307	7.6 7.7
21-31	174	.24	1430	124	24	.3	310	7.7
JUNE	1.74	.24	1430	124	24	• • •	510	
01-06	214	•29	1460	134	58	•7	353	7.9
07-19	286	. 39	1660	172	77	.9	460	7.9
20-30	231	.31		139	64	.8	380	7.9
JULY 01-08	340	.46	1130	197	96	1.1	553	8.0
09	460	.63	2630	264	126	1.3	700	7.9
10-14	342	.47	1290	195	90	1.1	544	8.0
15-28	449	.61	857	248	120	1.4	696	8.1
29-31	509	.69	638	284	146	1.5	779	8.1
AUG. 01-03	580	70		212	111		889	0 1
01-03	774	.79 1.05	484 832	312 354	171 187	1.7 2.7	1180	8.1 7.8
07-08	567	.77	1030	296	145	1.8	868	7.9
09	1290	1.75	3520	504	274	4.3	1890	7.3
10-17	608	.83	741	300	145	2.1	928	7.6
18	883	1.20	2070	352	138	3.6	1320	7.3
19-22 23-31	513 454	.70	1830 956	272	121 138	1.7	787 702	7.4 7.9
SEP.	424	.62	956	268	1 30	1.2	102	1.7
01-04	505	.69	840	272	135	1.6	770	8.4
05	1060	1.44	4720	600	464	1.9	1590	7.9
06	802	1.09	18340	312	145	3.5	1180	7.8
07	332	•45	10100	180 184	47 83	1.3	577 483	7.9 7.9
08-13 14	312 545	.42	2840 10000	308	168	1.0	829	8.0
15-30	273	.37	2130	160	64	.9	425	8.1
TD. AVG.	351	-48		182	75	1.3	534	7.8
IME WTD.	376	.51		199	91	1.3	567	7.9
TONS PER DAY	1870	. 51		177	71			
. ER UAT	1010							

# 09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX. -- Continued

	CHE	MICAL ANA	LYSES, WA	TER YEAR	OCTUBER :	1969 10 5	EPIEMBEK .	1970	
DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED STLICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PD- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)
OCT. 15	1600	2600	10		54	9.8	31	•В	126
NOV.	0830	1990	7.2		57	12	39	2.4	129
DEC.	1420	1820	12		54	11	37	2.B	122
JAN. 13 FEB.	1710	1180	9.5		85	17	61	2.9	158
10 MAR.	1150	2550	10		44	8.3	28	2.2	116
19 APR.	1615	1800	9.8		5D	10	32	2.4	118
14 MAY	1320	724	9.8	40	77	15	52	2.7	154
12	1349	1570	7.5		62	11	32	1.7	133
09	1100	214D	7.0		58	B.9	30	1.8	116
14 AUG.	1245	910	8.4	О	68	12	42	2.3	140
11 SEP.	1745	370	10	0	85	14	66	3.3	172
09	0830	3280	8.3	10	52	7.3	27	2.4	110
DATE	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUD- RIDE (F) (MG/L)	DIS- SDLVED NITRITE (N) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED BDRON (B) (UG/L)
DCT. 15	0	126	7.9	.3		.38	1.7		
NOV. 19	o	147	9.2	.3		.65	2.9		
DEC. 10	e	141	7.6	• 2		3.1	14		
JAN. 13	0	250	15	• 7		1.1	5.0		
FEB.	٥	104	6.8	.3		.18	.8		
MAR. 10	o	121	7.6	.3		.50	2.2		
APR. 14	o	208	12	•3	.02	. 63	2.8	.07	120
MAY 12 JUNE	c	138	8.2	.4		•70	3.1	-	
09	0	1 30	7.5	.4		.54	2.4	_	
14 AUG.	0	173	12	.5	.00	. 65	2.9	•00	100
11 SEP.	0	251	14	.5		1.0	4.6		
09	٥	121	6.4	-4		- 34	1.5		•
DA	SOL SOL (RE DUE 180 TE (MC	LVED SOL LIDS SOL EST- (SUM E AT CONS ) C) TUEM	TI- NES	C: D- BOI S HAI MG) NE:	AR- NATE SOI RD- T	AD- CD RP- DU ION AN TIO (MI	FIC N- CT- CE CRO-	ATI	PER- URE G C)
DCT 15		315	304	172	68	1.0			13.5
NDV 19		332	340	190	84	1.2		7.6	3.0
DEC 13 JAN		342	340	183	83	1.2	527		5.5
13 FEB		543	524	288	158	1.6			5.2
10 MAR		272	261	146	51	1.0			6.4
10 APR		304	293	162	66	1.1			7.6
14 MAY	•••	468	456	240	114	1.5		8.0	11.9
12 JUN	iE	345		188	79	1.0			17.2
09 JUL	Y	324		175	80	1.0			14.5
AUG		408		224	109	1.2			23.5
SEP	•	564		274	133	1.7		_	28.5
09	•••	294	280	164	74	• 9	446		15.0

# 0936 8000 SAN JUAN BIVER AT SHIPROCK, N. MEX.--Continued

# CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

FIELD AND BIOCHEMICAL DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH {UNITS}	TEMPER- ATURE (DEG C)	AIR TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)
вст.							
15 NOV.	1600	2600	510	8. 3	13.5		
19 DEC.	0830	1990	560		3.0		
10	1420	1820		8.4	5.5		
JAN. 13	1710	1180	770	8.7	5.2		5
FE8. 10	1150	2550	440	7.9	6.4	-	5
MAR. 10	1615	1800	480	7.9	7.6	6.6	7
APR. 14	1320	724	700		11.9		7
MAY 12	1340	1570	520	8.3	17.2	29.6	5
JUNE 109•••	1100	2140	515		14.5	17.5	8
JULY 14	1245	910	620	8.4	23.5	34.5	3
AUG. 11	1745	370	780	8.2	28.5	33.5	
S EP •	0830	3280		B•1	15.0	18.0	10
DATE	TUR- B10- ITY (JTU)	DIS- SOLVED OXYGEN (MG/L)	CHEM- ICAL OXYGEN DEMAND (LDW LE VEL) (MG/L)	8 IO- CHEM- ICAL DXY GEN DEMAND (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	IMME- DIATE COLI- FORM (COL. PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
ост.							
15 NOV.		8 <b>B</b>	9	1.2	1200	7600	780
19 DEC.		11.5	5	1.0	6800	40000	90
10 JAN.		11.0	20	6. 6	1260	3400	10
13		11.0	13	1.2	51000		<10
10		10.6	11	3,9	1000	9900	40
MAR. 10	80	9.7	16	1.8	<10	4700	<10
APR. 14	78	9.1	10	1.8	160	2500	100
MA Y 12	120	7. 9			3580	E10000	130
JUNE 09	89	8.3	9	1.5	200	1700	130
JUL Y 14	60	7.2	18	1.2	E1430	9200	20
11	5 30	6.0		2.0	9900	14000	30
SEP. 09	475	7. 1	11	1.2	900	7600	<10
E ESTI	MATED.						

E ESTIMATED.

# PESTICIDE ANALYSES (UNFILTERED SAMPLES)

	TIME	DIS- CHARGE	ALDR IN	CHLOR- DANE	DDD	DDE	DDT	DI- AZINON	DI- Eldrin
OATE		(CFS)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
JULY									
14 SEP.	1245	910	• 00	• 0	•00	•00	-00		-00
00	0830	3280	.00	•0	•00	•00	.00	•00	•00
			HEP TA-						
		HEPT A-	CHL OR		METHYL				
	ENORIN	CHLOR	<b>EPOXIDE</b>	LINDANE	PARA-	PARA-	2,4-D	2,4,5-T	SILVEX
OA TE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	THION (UG/L)	THION (UG/L)	(UG/L)	(UG/L)	(UG/L)
JULY								,	100727
14 SEP.	• 00	• 00	•00	•00			•00	.00	• 00
09	• 00	.00	•00	•00	•00	- 00	- 00	. 00	00

## 09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX .-- Continued

# MACROINVERTEBRATE ANALYSIS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

AUG. 11, 1970 - COLLECTED BY SURBER SAMPLER (3 SQ FT)

ORGANISM AND CLASSIFICATION NUMBER

DIPTERA
TENDIPEDIDAE
EPHEMEROPTERA
BAETIDAE
RICHDITERA
HYDROPSYCHIDAE
CADDISELY CASES (UNIDENTIFIED)
PERLODIDAE
PERLODIDAE
1
ACARINA
TOTAL NUMBER OF ORGANISMS
24
TOTAL NUMBER (GRAMS)
~ 0.12

COMMON NAME FOR PRECEDING ORDERS: DIPTERA - FLIES, MOSQUITOES, MIDGES EPHEMEROPTERA - MAYELIES TRICHOPTERA - CADDIS FLIES PLECOPTERA - STONE FLIES ACARIMA - MITES

# BIOCHEMICAL, SPECTROGRAPHIC, AND RADIO CHEMICAL ANALYSES WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY)

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L)	DIS- SOLVED ORTHO PHOS- PHATE (PO4) (MG/L)	DIS. ORTHO + HYDRO. PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/L)	DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVEO IRON (FE) (UG/L)	DIS- SOLVED LEAD (PB) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)
OCT.										
15 NOV.	A 1605	•27		•940	<100	3	<5	10	<20	<20
19 DEC.	0835									
10 JAN.	1425									
13 FEB.	1715	1.0		.610	<100	<4	<10	<10	<40	<20
10 MAR.	1155									
10	1620									
APR. 14 May	1325	1.2		.010	<100	<3	<10	<30	<40	<20
12	1345									
JUNE 09	1105	.68	.20	.200						
JULY 14	1250	•60								

DATE	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)	DIS- SOLVED ALPHA (PC/L)	SUS- PENDED ALPHA (PC/L)	SOLVED GROSS BETA AS CS-137 (PC/L)	PENDEO GROSS BETA AS CS-137 (PC/L)	DIS- SOLVED RADIUM 226 (RA) (PC/L)	TOTAL STRON- TIUM 90 (PC/L)	DIS- SOLVED NATURAL URANIUM (U) (UG/L)
OCT.									
15 NOV.	<10	10	2.0	6.0	3.0	17	.1		2.1
19			3.0	3.0	6.0	7	.1		3.2
DEC.									
10 Jan.			1.0	3.0	3.0	6	•0		3.4
13	<20		3.0	2.0	6.0	4	.0		4.5
FEB.									
10			1.0	1.0	5.D	3	.0		6.2
MAR. 10			2.0	2.0	2.0	5	.0		2.2
APR.			2.0	2.0	2.0	,	••		
14A	<20		3.D	6.0	19	9	. 2		5.0
MAY			2.0	23	7.0	25	.0		3.4
12 JUNE			2.0	23	7.0	25	•0		3.4
D9A			2.0	6.1	6.2	15	.1	.5	4.2
JULY									
14A			3.0	3.0	6.0	7.1	.1	1.0	3.6

A INCLUDES O PICOCURIES PER LITRE OF STRONTIUM 89.

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11.5

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8.0

## SAN JUAN RIVER BASIN

## 0936 8000 SAN JUAN RIVER AT SHIPROCK, N. MEX .-- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					(ONCE-DA	ILY MEASU	REMENT)					
CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	542	509	758	484	385	401	604	750	3 38	433	867	753
2	515	482	652	482	4C1	417	647	777	348	468	911	767
3	994	747	517	457	392	419	742	880	370	538	868	770
4	792	493	517	455	412	426	757	915	366	564	1180	748
5	591	488	521	494	412	411	739	920	341	567	1290	1590
6	542	482	538	474	417	405	730	662	3 90	584	1100	1180
7	511	473	515	453	418	396	711	560	523	624	860	577
8	518	478	526	613	416	395	701	544	465	607	875	437
9	497	486	534	784	418	397	728	459	450	700	1890	458
10	475	513	468	779	415	457	695	475	4 53	551	1060	488
11	477	490	457	772	414	474	701	543	451	518	785	497
1.2	503	491	539	754	418	464	690	507	507	517	841	480
13	495	493	452	772	420	455	653	424	459	546	887	533
14	485	489	505	669	417	446	678	402	467	595	955	829
15	479	481	499	656	419	451	655	392	467	643	970	428
16	474	482	511	632	414	448	668	364	467	665	905	338
17	477	518	514	641	406	449	633	344	450	675	793	358
18	463	535	485	699	405	453	731	327	439	725	1320	392
19	484	620	469	690	399	468	755	288	410	742	777	419
20	480	616	482	690	397	463	786	274	382	709	751	434
21	484	527	500	655	397	448	784	292	352	721	755	456
22	1220	528	506	653	400	438	768	292	355	731	823	457
23	1000	501	514	704	408	439	753	285	362	711	684	438
24	664	497	505	685	401	441	749	287	405	674	666	446
25	573	517	496	679	394	435	750	310	3 90	678	659	444
26	527	500	492	711	3 9 5	451	856	304	379	682	695	447
27	506	497	509	705	397	569	857	307	364	721	705	458
28	523	492	515	698	398	610	785	32B	397	692	726	462
29	632	623	509	536		574	662	325	392	753	736	465
30	544	743	500	367		565	679	351	401	778	720	470
31	500		488	369		571		356		815	732	
AVG	580	526	516	620	407	459	722	459	411	643	896	567

#### TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT) CAY UC T NOV DEC JAN FE8 MAR APR TUN JUL AUG SEP 25.0 21.5 26.0 28.5 2.0 3.0 5.0 22.5 19.0 9.0 3.0 1.5 8.5 8.5 16.0 12.0 26.0 18.0 12.0 10.0 10.0 7.0 7.0 9.0 4.5 5.5 7.0 4.5 9.0 8.0 8.5 8.5 21.5 23.5 23.0 26.5 25.0 19.0 12.0 16.0 12.0 1.0 0.0 6.0 4.5 7.0 22.5 10.0 0.0 18.5 26.0 20.5 27.5 26.0 25.5 21.0 22.0 22.0 21.5 20.0 15.0 18.0 16.5 15.0 8.0 14.0 15.0 14.0 13.0 10.0 10.0 9.5 9.5 4.5 4.0 4.0 4.0 0.0 0.0 0.0 7.5 7.0 9.0 9.0 9.5 10.0 10.0 16.0 9.0 8.0 10.0 19.5 13.0 12.0 10.0 15.0 13.0 6 7 8 11.0 15.5 10 10.0 3.0 9.0 B. C 9.0 14.0 13.5 21.0 20.0 10.0 11.0 12.0 12.0 12.0 18.5 19.5 12.0 20.5 20.0 20.5 21.5 30.0 12.5 4.0 5.0 7.0 8.5 9.5 10.5 7.0 13.0 11.0 12.5 20.5 17.0 17.0 11 3.5 8.5 5.0 5.0 5.0 14.5 21.0 20.5 20.0 20.5 20.0 16.0 15.0 12.0 5.0 10.5 9.0 7.5 14 12.0 8.5 4.0 8.0 10.C 14.0 10.0 12.0 13.0 12.0 12.0 12.0 5.0 6.0 7.0 7.5 7.0 5.0 5.5 6.5 12.0 7.0 5.5 8.5 9.0 14.0 10.0 8.0 9.0 14.5 10.5 12.5 12.5 13.0 11.0 23.0 23.5 23.5 23.0 21.0 12.0 12.0 12.0 15.0 15.5 23.0 21.0 16 17 10.0 8.5 24.0 28.0 22.5 26.5 6.0 3.0 9.5 7.5 6.5 6.5 19.5 20.0 20.0 20.5 19 4.5 5.0 6.5 20 6.0 12.0 10.0 9.0 12.0 10.0 9.0 10.0 11.0 12.0 10.0 13.5 14.5 15.0 17.0 17.5 11.0 12.5 13.0 13.5 17.0 22.0 24.0 21.5 22.5 21.5 5.5 7.0 7.5 8.5 9.0 9.5 8.0 23.5 20.0 18.5 14.0 5.0 21 22 23 24 25 6.0 7.5 24.5 24.5 24.5 19.5 11.5 20.0 8.0 6.0 4.0 7.5 10.0 7.5 9.5 10.0 20.5 22.0 26.5 23.0 28.0 22.5 9.0 7.0 11.0 10.0 18.0 17.5 11.0 11.0 14.0 14.0 13.0 13.0 13.5 14.0 6.5 4.0 3.0 2.0 8.0 7.0 4.0 1.0 26 27 12.0 9.5 26.0 8.5 7.0 23.0 23.5 23.5 24.0 6.5 9.0 21.0 10.0 20.0 20.0 20.5 26.5 10.0 12.0 12.0 30 31 5.0 3.5 6.5 7.0 6.0 1.5 1.5 ---

9.C

11.5

14.5

19.5

23.5

21.0

14.5

# 0936 8000 SAN JUAN RIVER AT SHIPROCK, N. MEX .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		OCTOBER			NOVEMBER			DEC EMB ER	
D AY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATIUN (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4	1530 1790 2870 3430 2640	1400 2200 9900 10700 4800	578C 10600 76700 99100 34200	2320 1770 1590 1970 2220	3150 3810 2940 2720 2100	19700 18200 12600 14500 12600	967 1260 1770 1940 2060	1170 1500 1810 1510 1210	3050 5100 8650 7910 6730
6 7 8 9	2450 2420 2550 2450 2380	2950 2750 2700 2800 2750	19500 18000 18600 18500 17700	226° 2100 214° 2160 2200	1800 1980 2000 1900	11000 11200 11600 11100 11300	2060 2010 1970 1990 2050	1100 950 1170 1200 1330	6120 5160 6220 6450 7360
11 12 13 14 15	2680 2680 2680 2500 2400	2600 2700 2100 2350 1950	18800 15900 1520C 1590C 1260C	2120 2100 2140 2140 2090	1500 1500 1580 1590 1440	8590 8510 9130 8670 8130	1840 1960 1970 2010 2100	1090 1060 1210 1970 1200	5420 5610 6449 10700 6800
16 17 18 19 20	2300 2300 2320 2300 2300	1550 1800 1750 1600 1600	9630 11200 11000 9940 9940	2140 2210 2110 1680 1690	1930 1980 1800 1870 1250	11200 11800 10300 8480 5700	2060 2080 2030 2030 1960	1050 1060 940 900 770	5840 5950 5150 4930 4070
21 22 23 24 25	3920 11300 8500 3670 2960	3800 52200 36600 13000 8000	40200 1730000 894000 129000 63900	182C 2000 2010 2010 197C	1760 1600 1360 1590 1300	8650 8640 7380 8630 6910	1940 1990 1940 2010 1960	780 910 900 890 1110	4090 4890 4710 4830 5870
26 27 28 29 30 31	2770 2760 2550 2550 2550 2300	5700 3759 4900 6520 6050 3090	42600 27900 33700 44900 41760 19200	1980 1950 1960 1370 1030	1050 1130 1410 1750 950	5610 5950 7460 6470 2640	1920 1920 1750 1800 1780 1890	1020 1020 950 900 930 1110	5290 5290 4490 4370 4470 5660
TUTAL	94800		3515890	5925C		292650	59017		177620
		JANUARY			FEBRUARY			MARCH	
VAY	MEAN DI SCHARGE (CFS)	JANUARY  MEAN CONCEN- TRATION (MG/L)	SEDIMENT OLSCHARGE (TONS/DAY)	MEAN DISCHARGF (CFS)	FEBRUARY  MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MARCH MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/OAY)
UAY 1 2 3 4 5	DI SCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE (CFS) 2420 2500 2560 2430 2460	MEAN CONCEN- TRATION (MG/L) 630 2260 1000 1000 790	DISCHARGE (TONS/OAY) 4120 15300 6910 6560 5250
1 2 3	01 SCHARGE (CFS) 1780 1740 1680 1720	MEAN CONCEN- TRATION (MG/L) 1000 1080 1160 1000	01SCHARGE (TONS/DAY) 4810 507C 5260 4640	DISCHARGF (CFS) 2770 2710 2640 2480	MEAN CONCEN- TRATION (MG/L) 1380 1700 1790 1540	DISCHARGE (TONS/DAY) 10300 12400 12800 10300	DISCHARGE (CFS)  2420 2500 2560 2430 2440 24400 2430 2370 2370 2370	MEAN CONCEN- TRATION (MG/L) 630 2260 1000 1000 790 650 750 850 850 680 930	DISCHARGE (TONS/OAY) 4120 6910 6910 6560 5250 4210 4920 5440 4090 4750
1 2 3 4 5 6 7 8	01 SCHARGE (CFS) 1780 1740 1680 1720 1710 1700 1720 1170 394	MEAN CONCEN- TRATION (MG/L) 1000 1000 1000 950 960 800 630 700	01SCHARGE (TONS/DAY) 4810 507C 5260 4640 4390 441C 3720 1990 169C	DISCHARGE (CFS) 2770 2710 2640 2480 2420 2320 2300 236C 2370	MEAN CONCEN- IRATION (MG/L) 1380 1700 1790 1540 1250 1390 1290 1300 1250	01SCHARGE (TONS/OAY) 10300 12400 12800 10300 8170 8010 8010 8020 9000 7940 6260 6460 7860 18700	01 SCHARGE (CFS) 2420 2500 2450 2450 2450 2450 2470 2370 2370 2230 1890 1860 1700 1670 1670	MEAN CONCENTRATION (MG/L) 630 1000 1000 790 650 850 680 930 830 630 680 740	DISCHARGE (TONS/OAY) 4120 15300 6910 6550 5250 4210 4920 5440 4920 4750 4170 3010 2890 30770 3380
1 2 3 4 5 6 7 8 9 10 11 12 13 14	01 SCHARGE (CFS) 1780 1740 1680 1720 1710 1700 1770 1170 994 995 902 967 1040 1020	MEAN CONCEN- TRATION (MG/L) 1000 1080 1160 1000 950 960 800 630 700 1080 1177 907 970 890	01SCHARGE (TONS/DAY) 4810 507C 5260 4640 4390 4417 3720 1990 277C 268C 2350 2720 2450	01 SCHARGE (FS) 2770 2710 2710 2440 2480 2420 2300 2360 2370 2450 2470 2470 2536	MEAN CONCENTRATION (MG/L)  1380 1700 1790 1590 1250 1250 1200 1250 1200 1250 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 1250 1200 120	olsCharGE (TONS/OAY) 10300 12400 12400 12800 8170 8710 8010 8280 9000 7940 6260 6400 7860 18700 15700	01 SCHARGE (CFS) 2420 2500 2500 2450 24400 2410 2370 2330 1800 1000 1000 1670 1670 1660 1640 1640 1650 1740	MEAN CONCENTRATION (MG/L) 630 2260 1000 1000 1000 650 750 660 930 830 660 740 660 660 660 660 660 660 660 660 660 6	DISCHARGE (TONS/OAY) 4120 15300 6910 6560 5250 4210 4970 5440 4970 4170 3010 2890 3017 3380 2780 2880 2780 2660 2490 3150
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	OI SCHARGE (CFS) 1780 1740 1680 1770 1770 1770 1770 1770 1770 1995 902 967 1040 1020 1030 97 1040 1050 1050	**HEAN CONCENTRATION (MG/L) 1000 1000 1000 1000 950 950 950 950 1000 100	01 SCHARGE (TONS/OAY) 4810 507C 5260 4640 4390 4417 3720 1990 1090 277C 248C 2250 2450 1970 186C 2580 2610 2250	DISCHARGE (CFS) 2770 2710 2710 2640 2480 2420 2300 2300 2300 2300 2450 2470 2450 2440 2530 2620 2580 2550 2490 2490 2520 2490	MEAN CONCENT AND C	01SCHARGE (TONS/OAY) 10300 12400 12400 12800 8170 8710 8010 8280 9010 7940 626C 6400 7860 18700 1140 6740 6520 6620 7650 6090 5230 4870	01 SCHARGE (CFS) 2420 2500 2450 2450 24400 2410 2370 2330 1880 1800 1600 1670 1670 1640 1640 1640 1640 1650 1740	MEAN CONCENT (MG/L)  630 (MG/L)  630 (1000 790 1000 790 650 680 680 680 680 680 680 680 680 680 68	OISCHARGE (TONS/OAY) 4120 15300 6910 6560 5250 4210 4920 5440 4970 3010 2890 3070 3380 2780 2880 2780 2780 2780 2780 2780 27
1 2 3 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 3 24	OI SCHARGE (CFS) 1780 1740 1680 1770 1770 1770 1770 1770 990 902 967 1040 1020 1030 997 1100 1070 1070 1070 1070 1070 1070	**HEAN CONCENTRATION (MG/L)  1000 1100 1100 1000 1000 1000 1000 1	0ISCHARGE (TONS/OAY) 4810 507C 5260 4640 4390 4417 3720 1990 1690 277C 268C 2357 2720 2450 2610 2610 2610 2650 2619 2050 1990 1990 1830	DISCHARGE (CFS) 2770 2710 2710 2647 2480 2420 2300 2300 2360 2370 2450 2450 2450 2440 2410 2511 2620 2620 2620 2620 2620 2620 2620 26	MEAN CONCENTRATION (4G/L)  1380 1700 1790 1590 1250 1250 1250 1200 1250 1250 1200 1250 125	01SCHARGE (TONS/OAY) 10300 12400 12400 12800 8170 8710 8010 8280 9000 7940 626C 6400 7860 18700 15700 6520 6620 7650 6090 5230	01 SCHARGE (CFS) 2420 2500 2450 2450 24400 2410 2370 2330 1890 1890 1690 1690 1690 1690 1640 1650 1740	MEAN CONCENTRATION (MG/L) 630 2260 1000 1000 1000 650 750 680 930 680 660 660 660 660 660 660 660 660 66	DISCHARGE (TONS/OAY) 4120 15300 6910 6560 5250 4210 4970 5440 4970 3010 2890 3070 3380 2780 2880 2490 3150 3170 2590 2740 27590 2740 2360

# 09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		SUSPE	NDED-SEDIMENT	ISCHARGE, WAT	EP YEAR OC	I DB EK 1969 I U S	EPTEMBER 1970		
		APRIL			YAM			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	S ED (MFNT DI SCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2	1120 861	620 470	1870	560 525	364 233	550 330	2790 2510	880 740	6630 5010
3	766	500	1030	945 448	190	230	2410	560	3640
4	676	923	1680	418	175	198	2460 2670	560 820	3720 5910
5	672	863	156C	43C	195	226			
6 7	666 687	830 910	1490 1690	862 1080	1240 1890	3670 5510	2310 2120	670 2290	4180 13800
8	721	1360	2650	1600	2660	11500	2127	770	4410
9 10	787 768	1300 930	2760 1930	1556 1360	1700 1040	7110 3820	2190 2250	940 800	5560 4860
11 12	718 748	740 610	1430 1230	122° 1490	970 1340	2640 5510	2330 2370	780 860	4910 5500
13	797	580	1250	2370	1370	8770	2140	590	3410
14 15	757 809	550 710	1120 1550	2560 2850	1960 2080	13500	2120 2010	550 600	3150 3260
			*						
16 17	791 830	570 970	1220 2170	3140 3620	2050 2530	17400 24700	1930 2130	470 267	2450 1540
18	805	650	1410	441C	3030	36107	2020	157	856
19 20	778 680	560 620	1180 1140	4460 4040	2500 2080	30100 22700	2210 2440	20 7 35 1	1240 2310
21 22	570 492	660 440	1020 584	3290 3110	2290 1670	20300	2480 2300	611 461	4090 2860
23	504	440	599	3250	1430	12500	2190	238	1410
24 25	531 515	360 300	516 417	3230 3170	1030	8980 8820	2120 2000	373 155	2140 837
26 27	422 489	230 320	262 422	3240 3290	900 940	7870 8350	1990 2050	160 206	860 1140
28	732	720	1420	2970	960	7700	2000	354	1910
29 30	807 651	770 600	1680 1050	2900 2470	83 C 74 O	6500 4940	1840 1820	507 419	25 20 20 60
31				2500	660	4460			
TCTAL	21150		39420	72413		314984	66320		106173
		JULY			AUGUST			SEPTEMBER	
		JULY			AUGUST Mean			MEAN	
ρΑγ	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TCNS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)		SEDIMENT Discharge (Tons/Day)
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TCNS/DAY)	DI SCHARGE (CFS)	MEAN CONCEN- TPATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) 815	DISCHARGE (TONS/DAY)
1 2	DISCHARGE (CFS) 1630 1390	MEAN CONCEN- TRATION (MG/L) 355 389	DISCHARGE (TCNS/DAY) 1560 1460	DI SCHARGE (CFS) 347 294	MEAN CONCEN- TPATION (MG/L) 104 78	DISCHARGE (TONS/DAY) 97 62	DISCHARGE (CFS) 616 616	MEAN CUNCEN- TRATION (MG/L) 815 475	OISCHARGE (TONS/DAY) 1360 790
1 2 3 4	DISCHARGE (CFS) 1630 1390 1260 1160	MEAN CONCEN- TRATION (MG/L) 355 388 312 372	DISCHARGE (TCNS/DAY) 1560 1460 1050 1160	JI SCHARGE (CFS) 347 294 299 378	MEAN CONCEN- TPATION (MG/L) 104 78 153 18800	DISCHARGE (TONS/DAY) 97 62 127 23500	DISCHARGE (CFS) 616 616 602 630	MEAN CUNCEN- TRATION (MG/L) 815 475 370 405	01SCHARGE (TONS/DAY) 1360 790 601 689
1 2 3	DISCHARGE (CFS) 1630 1390 1260	MEAN CONCEN- TRATION (MG/L) 355 388 310	DISCHARGE (TCNS/DAY) 1560 1460 1050	DI SCHARGE (CFS) 347 294 299	MEAN CONCEN- TRATION (MG/L) 104 78 153	DISCHARGE (TONS/DAY) 97 62 127	DISCHARGE (CFS) 616 616 602	MEAN CUNCEN- TRATION (MG/L) 815 475 370	DISCHARGE (TONS/DAY) 1360 790 601
1 2 3 4 5	DISCHARGE (CFS) 1630 1390 1260 1160 1150	MEAN CONCEN- TRATION (MG/L) 355 388 312 372 295	DISCHARGE (TCNS/DAY) 1560 1460 105C 1160 916	DI SCHARGE (CFS) 347 294 299 378 408	MEAN CONCEN- TRATION (MG/L) 104 78 153 18800 15000	97 62 127 23500 16500	D1SCHARGE (CFS) 616 616 602 630 1650	MEAN CUNCEN- TRATION (MG/L) 815 475 370 405 18200	01SCHARGE (TONS/DAY) 1360 790 601 689 88900
1 2 3 4 5	DISCHARGE (CFS) 1630 1390 1260 1160 1150	MEAN CONCEN- TRATION (MG/L) 355 388 310 370 295 278	DISCHARGE (TCNS/CAY) 1560 1460 105C 1160 916 856 3210	DI SCHARGE (CFS)  347 294 299 378 408  445 461	MEAN CONCEN- TRATION (MG/L) 104 78 153 18800 15000	DISCHARGE (TONS/DAY)  97  62 127 23500 16500 12900 3860	DISCHARGE (CFS) 616 616 602 630 1650 847D 11300	MEAN CUNCEN- TRATION (MG/L) 815 475 370 405 18200	01SCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000
1 2 3 4 5	DISCHARGE (CFS) 1630 1390 1260 1160 1150 1140 1200 1360 1920	MEAN CONCEN- TRATION (MG/L) 355 388 310 377 295 278 990 2830 4560	DISCHARGE (TCNS/DAY) 1560 1460 105C 1160 916 856 3210 105CC 24700	JI SCHARGE (CFS) 347 294 299 378 408 445 461 892 949	MEAN CONCEN- TPATION (MG/L) 104 78 153 18803 15009 10700 3100 17100 17100 17100	01SCHARGE (TONS/DAY) 97 62 127 23500 16500 12900 3860 77700 131000	DISCHARGE (CFS) 616 616 602 630 1650 847D 11300 5130 3140	MEAN CUNCEN- TRATION (MG/L) 815 475 370 405 18200 45700 14800 7000 3520	0 ISCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 97000 29800
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 1630 1390 1260 1160 1150 1140 1200 1360	MEAN CONCEN- TRATION (MG/L) 355 388 317 377 295 278 990 2830	DISCHARGE (TCNS/DAY) 1560 1460 1050 1160 916 856 3210 10500	JI SCHARGE (CFS) 347 294 299 378 408 445 461 892	MEAN CONCEN- TRATION (MG/L) 104 78 153 18800 15000 10700 3100 17100	97 62 127 23500 16500 12900 3860 77700	DISCHARGE (CFS) 616 616 602 630 1650 847D 11300 5130	MEAN CUNCEN- TRATION (MG/L) 815 475 370 405 18200 45700 14800 7000	01SCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 97000
1 2 3 4 5 6 7 8 9	DISCHAR GE (CFS)  1630 1390 1260 1160 1150 1140 1200 1380 1920 1960	MEAN CONCEN- TRATION (MG/L) 355 388 312 372 295 278 992 2832 4560 2910	DISCHARGE (TCNS/DAY) 1560 1460 105c 1160 916 856 3210 105cc 24700 14600	JI SCHARGE (CFS) 347 294 299 378 408 445 461 892 949 758	MEAN CONCEN- TRATION (MG/L) 104 78 153 18800 15000 10700 3100 17100 51200 15400	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 31500	DISCHARGE (CFS) 616 616 602 630 1650 84 TD 11300 5130 3140 2670	MEAN CONCEN- TRATION (MG/L) 815 475 370 405 18200 45700 14800 7000 3520 3520 3630	01SCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 97000 29800 29800 21400
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS)  1630 1390 1260 1150 1160 1150 1140 1200 1360 1920 1860	MEAN CONCEN- TRATION (MG/L) 355 385 317 377 295 278 999 2832 4560 2910	DISCHARGE (TCNS/DAY) 1560 1460 105c 1160 916 856 3210 105cc 24700 14600	JI SCHARGE (CFS)  34.7 294 249 378 408 445 461 892 949 758 573 412	MEAN CONCENTRATION (MG/L)  104 78 153 18800 15000 10700 3100 17100 51200 15400	DISCHARGE (TONS/DAY) 97 62 127 23500 16500 12900 3860 77700 131029 31500	DISCHARGE (CFS) 616 616 602 630 1650 847D 11300 5130 3140 2670	MEAN CUNCEN- TRATION (MG/L) 815 475 370 405 18200 45700 14800 7000 3520 3530	0 ISCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 97000 29800 25400
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS)  1630 1390 1260 1160 1160 1150  1140 1200 1380 1920 1960 1560 1377 1140 903	MEAN CONCENTRATION (MG/L) 355 388 317 377 295 278 999 2832 4560 2910 1012 627 479 393	DISCHARGE (TCNS/ DAY)  1560 1560 105C 1160 916 856 3210 105CC 24700 14600 4250 2250 147C 1020	JI SCHARGE (CFS) 347 294 299 378 408 445 461 892 949 758 573 412 298 255	MEAN CONCENTRATION (MG/L)  104 78 153 18800 15000 10700 3100 11100 51200 15400 2440 1490 610 460	DISCHARGE (TONS/DAY)  97  62  127  23500  16500  12900  3860 77770  131009  31500  3770  1560  491  317	DISCHARGE (CFS) 616 616 602 630 1650 84 TD 11300 5130 3140 2670 2620 2740 3930 6610	MEAN CUNCEN- TRATION (MG/L) 815 475 370 405 18200 14800 7000 3520 3530 3740 32200 30900	01SCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 97000 25400 21700 354000 548000
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHANGE (CFS)  1630 1390 1260 1110 1110 1120 1130 1140 1200 1380 1920 1860 1500 1377 1140 903	MEAN CONCEN- TRATION (MG/L) 355 388 3117 295 278 999 2837 4560 2910 1C12 607 479 393 298	DISCHARGE (TCNS/DAY) 1560 1460 105C 1160 916 856 3210 105CC 24700 14600 4250 2250 1470 1020 685	JI SCHARGE (CFS) 347 294 299 378 408 445 461 892 949 758 573 412 298 298 255 239	MEAN CONCEN- TPATION (MG/L) 104 153 18802 15002 10700 3100 17103 51200 15400 2440 460 460	DISCHARGE (TONS/DAY) 97 62 127 23500 16500 12900 3860 77700 31500 31700 1560 491 491 317	DISCHARGE (CFS) 616 616 616 602 630 1650 847D 1390 5130 3140 2670 2020 2740 3930 6810 6120	MEAN CUNCEN-TRATION (MG/L)  815 475 370 405 18200 45700 14800 7000 35220 3530 3340 32200 3740 32200 30900 11000	OISCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 27800 22800 21400 217100 354000 548000 189000
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHANGE (CFS) 1630 13391 1260 1160 1160 1150 1140 1200 1380 1920 1960 1500 1370 1140 903 851	MEAN CONCENTRATION (MG/LI) 355 389 312 377 295 278 991 2817 4560 2910 1011 637 479 393 298 208 209 209 209 209 209 209 209 209 209 209	DISCHARGE (TCNS/ DAY) 1560 1460 105c 1160 916 856 3210 105cc 24700 14600 4250 2250 1470 1270 1280 855	JI SCHARGE (CFS) 347 294 299 378 408 445 461 892 949 758 573 412 298 255 239	MEAN CONCENT PATION (MG/L)  1.04 78 153 18802 15020 10700 3102 11103 11103 115401 2440 1490 460 460	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 3770 1560 491 317 297	D1SCHARGE (CFS) 616 616 602 630 1650 847D 11390 5139 3140 2670 2620 2740 3930 6810 6120	MEAN CUNCENTRATION (MG/L)  815 475 370 4050 18200 14800 3520 3530 3740 32200 30900 11000 4300	OISCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 97000 29800 29800 21400 27700 35400 548000 189000
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHANGE (CFS) 1630 13391 1260 1160 1160 1150 1140 1200 1380 1920 1920 1140 903 851 788 744 672	MEAN CONCENT AT 10 M (MG/L) 355 385 317 295 278 4560 2910 1010 1017 479 298 263 248 173	DISCHARGE (TCNS/ DAY) 1560 1460 105c 1160 916 856 3210 105cc 24700 14600 4250 2250 1470 1020 685 560 498	JI SCHARGE (CFS)  347 294 294 378 408 445 461 892 949 758 573 412 298 255 298 255 298	MEAN CONCENT AT 100 MG/L)  104 78 153 18902 15000 110000 110000 110000 110000 110000 110000 11000 11000 11000 11000 11000 11000 11000 11000 11000 1100	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 3770 1560 491 317 297 1320 33800 73500	D1SCHARGE (CFS) 616 616 602 630 1650 847D 11300 5130 3140 2670 2620 2740 3930 6810 6120 4510 3630 3130	MEAN CUNCENTRATION (MG/L)  815 475 370 405 18200  14800 70000 35200 35200 37200 3120	OISCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 279000 29800 25400 27700 354000 548000 189000 52800 2800 2800 2800 2800 2800 2800
1 2 3 4 5 6 7 8 9 17 11 12 13 14 15 15 16 17 18 19	DISCHARGE (CFS) 1630 1390 1260 1160 1150 1140 1200 1380 1920 1860 1500 1377 1140 903 851 788	MEAN CONCENTRATION (MG/LI) 355 388 317 377 295 278 4500 2910 1CL2 637 479 393 298 263 248	DISCHARGE (TCNS/DAY)  1560 1460 1050 1160 856 3210 1050 24700 14600 4250 2250 1470 1070 685 560 498 314 412	JI SCHARGE (CFS) 347 294 299 378 408 445 461 892 949 758 573 412 298 255 239 400 955 789	MEAN CONCENTRATION (MG/L)  104 153 18902 15000 10700 12103 12400 14400 610 460 1220 11102 34500 11102 34500 7800	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 31700 1560 491 317 297 1320 33800 73500 19800	DISCHARGE (CFS) 616 616 602 630 1650 847D 11300 5133 3140 2670 2420 2700 3930 6610 66120	MEAN CUNCENTRATION (MG/L)  815 475 370 405 18200 45700 14800 7000 3520 3530 3030 3740 32200 11000 4200 2920 2120 2540	OISCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 278000 25400 21400 21400 548000 189000
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (CFS) 1630 1390 1260 1150 1140 1200 1380 1920 1150 1500 1540 177 1140 903 851	MEAN CONCENTRATION (MG/LI) 355 388 312 377 295 278 379 295 2790 1612 657 479 393 298 263 244	DISCHARGE (TCNS/DAY)  1560 1460 105c 1160 856 3210 105cc 24700 14600 4250 1470 1250 1470 1070 685	JI SCHARGE (CFS) 347 294 299 378 408 445 461 892 949 758 573 412 298 255 239 400 955 789 940 1230	MEAN CONCENTRATION (MG/L)  104 153 18902 15000 10700 15100 1200 15400 460 1220 11102 34500 14400	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 31700 1560 443 317 1560 443 317 1320 33800 73500 19800 59300	DISCHARGE (CFS) 616 616 602 630 10550 847D 11390 5139 3140 20770 2620 2770 3930 6010 6120 4510 3630 3130 28770 2600	MEAN CUNCENTRATION (MG/L)  815 475 370 405 18200 4050 3090 3090 31000 3090 11000 4300 2920 2120 22690 2670	OISCHARGE (TONS/OAY) 1360 790 601 689 88900 1030000 452000 97000 29800 25400 21400 548000 189000 52800 17900 28000 18700
1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21	DISCHANGE (CFS)  1630 1390 1260 1160 1160 1150 1140 1200 1380 1920 1960 1370 1140 903 851 788 744 672 657 661	MEAN CONCENTRATION (MG/L) 355 385 317 295 278 4560 2910 1611 607 479 29 28 17 37 29 28 17 32 29 24 46 46 9	DISCHARGE (TCNS/ DAY) 1560 1460 105c 1160 916 856 3210 105cc 24700 14600 4250 2250 1470 1020 685 560 498 314 412 455	JI SCHARGE (CFS)  347 294 294 378 408 445 461 892 949 758 573 412 298 255 239 400 955 789 940 1230	MEAN CONCENT AT 10 MEAN TO ME	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 3770 1560 491 317 297 1320 33800 19800 59300	D1 SCHARGE (CFS) 616 616 602 630 1650 847D 11300 5130 3140 2670 2620 2740 3930 6810 6120 4510 3630 3130 2870 2690	MEAN CUNCENTRATION (MG/L)  815 475 370 405 18200  14800 7000 3520 3530 3740 3520 3740 30900 110000 2020 2120 2690 2690 2690 1470	OISCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 97000 29800 25400 271700 354000 548000 189000 52400 28800 17900 20800 18700
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 15 17 18 19 20 21 22 23	DISCHANGE (CFS)  1630 1390 1260 1160 1160 1150 1140 1200 1380 1920 1860 1370 1140 903 851 788 744 672 657 661	MEAN CONCENTRATION (MG/L) 355 385 317 295 278 4560 2910 1011 1017 479 293 298 248 469 279 244 469 279 325	DISCHARGE (TCNS/DAY)  1560 1460 105c 1160 916  856 3210 105cc 24700 14600 4250 2250 1470 1220 685 560 498 314 412 455 865 505	JI SCHARGE (CFS)  347 294 294 378 408 445 461 892 949 758 573 412 298 255 239 400 955 789 940 1231 1840 1370 1100	MEAN CONCENT AT 10 MEAN TO ME	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 3770 1560 491 317 297 1320 33800 19800 19800 56600 87730	D1 SCHARGE (CFS) 616 616 602 630 1650 847D 11300 5130 3140 2670 2620 2740 3930 6810 6120 4510 3630 3130 2870 2690 2750	MEAN CUNCENTRATION (MG/L)  815 475 370 405 18200  14800 7000 3520 3530 3740 3520 3740 30900 11000 2020 2120 2690 2690 2690 2690 2690 2690 2690 26	OISCHARGE (TONS/DAY) 1360 790 601 689 88900 1030000 452000 97000 29800 25400 271700 354000 189000 52800 17900 20800 18700 9490 13800
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS)  1630 1390 1260 1180 1140 1200 1380 1920 1980 1980 1980 1980 1980 1980 1980 198	MEAN CONCENTRATION (MG/LI) 355 388 312 377 295 278 4550 2910 1017 479 393 298 263 244 465 279 325 365 365	DISCHARGE (TCNS/DAY)  1560 1460 105c 1160 856 3210 105cc 24700 14600 4250 2250 1470 1250 685 560 498 314 412 455 865 505 598 774	DI SCHARGE (CFS)  (CFS)  347  294  299  378  408  445  461  892  949  758  573  412  298  255  789  940  1230  1840  1370  1100  1020	MEAN CONCENTRATION (MG/L)  104 153 18902 15000 12100 12100 15400 14400 1220 11100 460 12100 14400 33700 15400 33700 15400	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 31700 1560 491 3171 1320 33800 73500 19800 59300 171000 87300 8730	D1 SCHARGE (CFS) 616 616 602 630 1650 847D 11300 5130 3140 2670 2620 2740 3930 6610 6120 4510 3630 3130 2870 2600 2780 2780 2780 2780 2780 2780 2780 27	MEAN CUNCENTRATION (MG/L)  815 475 370 405 18200 45700 14800 7000 7000 7000 7000 7000 7000 7000	OISCHARGE (TONS/OAY) 1360 790 601 689 88900 1030000 452000 279000 279000 279000 279000 277000 354000 187000 187000 187000 187000 18700 9490 13800 13800 13800 13800 13800 13800
1 2 3 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS)  1630 1390 1260 1180 1140 1200 1380 1920 1980 1980 1980 1980 1980 1980 1980 198	MEAN CONCENTRATION (MG/LI) 355 388 312 377 295 278 4550 2910 1017 479 393 298 263 244 465 279 279 325 365 305	DISCHARGE (TCNS/CAY)  1560 1460 105c 1160 3210 105cc 24700 14600 4250 2250 1470 1250 605 560 498 314 412 455 865 500 508 774 632	JI SCHARGE (CFS) 347 294 299 378 408 445 461 892 949 758 573 412 298 255 239 400 955 789 940 1230	MEAN CONCENTRATION (MG/L)  104 153 18902 15000 10700 15100 12400 15400 460 1220 11100 34500 14400 33700 15400 33700 15400	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 3770 1560 491 317 1320 38800 73500 19800 59300 171000 8730 8800 8730 3800 73500 2520	DISCHARGE (CFS) (CFS) (CFS) 616 616 602 630 10550 847D 11390 5139 3140 2070 2620 2740 3930 6610 4520 4510 3630 3130 2870 2690 2750 2690 2750 2690 2750 2680 2289	MEAN CUNCENTRATION (MG/L)  815 475 370 405 18200 45700 14800 7000 7000 7000 7000 7000 7000 7000	OISCHARGE (TONS/OAY) 1360 790 601 689 88900 1030000 452000 277000 28600 25400 21700 354000 189000 189000 18700 9490 13800 13800 13800 13800 13800 13800 13800 13800
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 5 26	DISCHANGE (CFS)  1630 1390 1260 1150 1160 1150 1140 1200 1380 1920 1860 1970 1860 1788 744 672 657 661 693 671 682 788 710	MEAN CONCENTRATION (MG/L) 355 385 317 295 278 4560 2910 1011 6077 479 295 248 173 298 248 469 279 325 365 305 269	DISCHARGE (TCNS/DAY)  1560 1460 105c 1160 916  856 3210 105cc 24700 14600 4250 2250 1470 1220 685 560 498 314 412 455 565 598 774 632	JI SCHARGE (CFS)  347 294 294 378 408 445 461 892 949 758 573 412 298 255 239 400 955 789 940 1230 1840 1370 1100 1020 900	MEAN CONCENT AT 10 MG/L)  104 18807 15000 11000 11000 11000 11000 14000	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 3770 1560 491 317 297 1320 33800 19800 19800 56600 87730 3800 2200	DISCHARGE (CFS) 616 616 602 630 1650 847D 11390 5139 3140 2670 2620 2740 3930 6810 6120 4510 3630 3130 2870 2690 2750 2680 2249	MEAN CUNCENTRATION (MG/L)  815 475 370 405 18200  14800 7000 3520 3530  30700 31700 32200 31700 32200 2670 2670 2670 2670 2670 2670 2670	OISCHARGE (TONS/OAY) 1360 790 601 689 88900 1030000 452000 97000 29800 25400 271700 354000 548000 189000 52400 28600 17900 20800 18700 9490 13800 18100 18200 18100
1 2 3 4 5 6 7 8 9 10 11 12 14 14 15 16 17 18 19 20 21 22 22 22 22 22 25 26 27 28	DISCHANGE (CFS)  1630 1390 1260 1160 1160 1160 1150 1140 1200 1380 1920 1960 1370 1140 903 851 788 744 672 657 661 693 671 692 785 768	MEAN CONCENTRATION (MG/LI) 355 388 317 295 278 4790 2817 4550 2910 1010 6077 4799 298 298 298 298 298 298 298 298 204 469 279 305 305 305	DISCHARGE (TCNS/ DAY)  1560 1460 105c 1160 916  856 3210 105cc 24700 14600 4250 2250 1470 1020 685  560 498 314 412 455 505 598 774 6322 516 570 544	JI SCHARGE (CFS)  347 294 294 378 408 445 461 892 949 758 573 412 298 255 239 400 955 789 940 1230 1840 1270 1000 900	MEAN CONCENT AT 100 C	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 3770 1560 491 317 297 1320 33800 19800 19800 19800 56600 87730 3800 2200 17900 2200 1797 852	D1SCHARGE (CFS) 616 616 602 630 1650 847D 11300 5130 3140 2670 2620 2740 3930 6810 6120 4510 3630 3130 2870 2670 2750 2680 2280 2270 2130 2000	MEAN CUNCENTRATION (MG/L)  815 475 370 405 18200 14800 7000 3740 3750 3750 3750 2020 2020 2020 2020 2020 2050 1470 2030 1170 2050 1750 1440 2190 1680	OISCHARGE (TONS/DAY)  1360 790 601 689 88900 1030000 452000 97000 29800 25400 271700 354000 548000 189000 52400 28600 17900 20800 18700 9490 13800 18100 18200 18100 18200 18300 18400
1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 5 15 16 7 18 19 20 21 22 23 24 25 26 27 28	DISCHARGE (CFS)  1630 1390 1260 1150 1140 1200 1380 1920 1980 1560 1570 1140 403 651 788 744 672 6671 691 692 785 768 710 728 784 538	MEAN_CONCERT TRATION (MG/L)  355 385 317 295 295 295 2817 4560 2910 1011 607 479 393 298 263 244 469 229 229 229 2305 305 269 207 207 207 207 207 207 207 207 207 207	DISCHARGE (TCNS/DAY)  1560 1460 1950 1950 1160 3210 1050 24700 14600 4250 2250 14700 1470 2250 1470 1470 685 560 560 560 571 632 516 570 544 218	DI SCHARGE (CFS)  294 294 378 408 445 461 892 949 758 573 412 298 255 789 900 1230 1370 1170 1022 900 816 700 686	MEAN CONCENT OF THE PATTON (MG/L)  1 14 78 153 18807 15000 10700 3100 17103 151200 151200 151200 151200 151200 151200 151200 151200 151200 151200 151200 151200 151200 151200 15100 15100 1510000 151000 15100000 15100000 15100000 151000000 15100000000	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 31700 1560 491 317 1200 38800 73500 19800 59300 171000 56600 8730 8870 2620 2200 2200 1296 852	DISCHARGE (CFS)  (CFS)  616 616 602 630 1650  847D 11300 5130 3140 2670  2620 2740 3930 6810 6120  4510 3130 2870 2800 2900 2130 2270 2390 2270 2390 2270 2390 2270 2390 2270 2390 2270 2390 2390 2270 2390 2270 2390 2270 2390 2270 2390 2270 2390 2390 2390	MEAN CUNCENTRATION (MG/L)  815 475 370 405 4700 14800 7000 3020 3020 3020 3020 31400 400 2020 2020 7000 11000 4000 7000 7000 7000 7000 70	OISCHARGE (TONS/DAY)  1360 790 601 689 88900  1030000 452000 97000 29800 25400 21400 27700 354000 548000 189000  52800 18700 9490 13800 13800 13800 13800 18700 9490 13800 18800 18900 18900 18900 18900 18900 18900 18900
1 2 3 4 5 6 7 8 9 10 11 12 14 14 15 16 17 18 19 20 21 22 22 22 22 22 25 26 27 28	DISCHANGE (CFS)  1630 1390 1260 1160 1160 1160 1150 1140 1200 1380 1920 1960 1370 1140 903 851 788 744 672 657 661 693 671 692 785 768	MEAN CONCENTRATION (MG/LI) 355 388 317 295 278 4790 2817 4550 2910 1010 6077 4799 298 298 298 298 298 298 298 298 204 469 279 305 305 305	DISCHARGE (TCNS/ DAY)  1560 1460 105c 1160 916  856 3210 105cc 24700 14600 4250 2250 1470 1020 685  560 498 314 412 455 505 598 774 6322 516 570 544	JI SCHARGE (CFS)  347 294 294 378 408 445 461 892 949 758 573 412 298 255 239 400 955 789 940 1230 1840 1270 1000 900	MEAN CONCENT AT 100 C	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 3770 1560 491 317 297 1320 33800 19800 19800 19800 56600 87730 3800 2200 17900 2200 1797 852	D1SCHARGE (CFS) 616 616 602 630 1650 847D 11300 5130 3140 2670 2620 2740 3930 6810 6120 4510 3630 3130 2870 2670 2750 2680 2280 2270 2130 2000	MEAN CUNCENTRATION (MG/L)  815 475 370 405 18200 14800 7000 3740 3750 3750 3750 2020 2020 2020 2020 2020 2050 1470 2030 1170 2050 1750 1440 2190 1680	OISCHARGE (TONS/DAY)  1360 790 601 689 88900 1030000 452000 97000 29800 25400 271700 354000 548000 189000 52400 28600 17900 20800 18700 9490 13800 18100 18200 18100 18200 18300 18400
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	DISCHANGE (CFS)  1630 1390 1260 1160 1160 1160 1150 1140 1200 1380 1920 1860 1370 1140 903 851 788 744 672 657 661 693 671 642 785 768 710 728 784 538	MEAN CONCENTRATION (MG/LI)  355 388 317 295 278 4790 2817 4550 2910 1011 6077 4779 373 298 248 173 232 244 469 279 325 365 305 305 305	DISCHARGE (TCNS/DAY)  1560 1460 1050 1050 1160 3210 10500 24700 14600 4250 1470 1020 685 560 498 3114 412 455 865 500 5774 632 516 570 544 218	JI SCHARGE (CFS)  347 294 294 378 408 445 461 892 949 758 573 412 298 255 239 400 955 789 940 1230 1840 1230 1840 1270 1000 816 700 686 644 623	MEAN CONCENT AT 100 C	DISCHARGE (TONS/DAY)  97 62 127 23500 16500 12900 3860 77700 131000 31500 31700 1560 491 317 297 1320 33800 73500 19800 59300 171000 56600 #730 #730 171000 56600 #730 #730 17900 1852 11000 1849	DISCHARGE (CFS)  (CFS)  616 616 602 630 1650 847D 11300 5130 3140 2670 2620 2740 3930 6810 6120 4510 2600 2520 2750 2680 2240 2270 2130 2000 2130	MEAN CUNCENTRATION (MG/L)  815 475 370 405 4700 14800 7000 3020 3020 3020 3020 31400 400 2020 2020 7000 11000 4000 7000 7000 7000 7000 70	OISCHARGE (TONS/DAY)  1360 790 601 689 88900  1030000 452000 97000 29800 25400 21400 27700 354000 548000 189000  52800 18700 9490 13800 13800 13800 13800 18700 9490 13800 18800 18900 18900 18900 18900 18900 18900 18900

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

688895 8848787

# 09368000 SAN JUAN RIVER AT SHIPROCK, N. MEX. -- Continued

PARTICLE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEWICALLY DISPERSED; N, IN NAILYE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, DISTILLED WATER)

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		WATER								PART	CLE S	SIZE					
		TEM-			SUSPENDED												METHOD
		PERA-		CONCEN-		PERCE	NT F	INER '	FHAN	THE S!	IZE ()	IN MI	LIME'	TERS)	INDI	CATED	DF
		TURE	DISCHARGE	TRATION	DISCHARGE												ANALY-
DATE	TIME	( C)	(CFS)	(4G/L)	(YAG\ZNCT)	.002	.004	.008	.016	.031	•062	-125	•250	.500	1.00	2.00	515
OCT 4, 1969	0800	10.0	3500	12500	118000	35	46		60		88	100					VPWC
OCT 25	1630	12.5	278C	7 3 30	55000	39	44		48		65	86	97	100			VPWC
OCT 30	0645	5.D	2 5 5 0	7040	48500	35	45		57		73	92	100				VPWC
DEC 19	1430	7.5	2060	968	5050		72				19	49	99	100			. V
FEB 10, 1970	1140				9790						13	37	93	100			
FEB 10. 1970	1140	6.5	2500	1450	9190						13	٠,	93	100			٧
APR 8	1800	15.5	672	1570	2550	54	62		70		74	79	97	100			VPWC
APR 14	1320	12.0	724	587	1150	16	19		27		42	52	82	99	100		VPWC
MAY 20	1630	16.5	3880	1670	17500	9	10		13		36	73	100				VPWC
JUN 9	1215	14.5	2160	1980	11500	10	12		17		23	28	52	82	100		VPMC
JUL 20	2100	27.0	748	277	559	36	42		50		67	74	87	100			SPMC
AUG 6	0630	22.0	478	11300	14600	78	87		96		99	99	100				SPMC
AUG 11	1900	28.5			3310	46	56	66	76	85	89		93	99			
			560	2190	3310		5	23				90			100		VPWC
AUG 11	1900	28.5	560	2190		1			77	85	89	90	93	99	100		VPN
AUG 17	2100	22.0	1150	18900	58700	42	54		73		95	97	99	100			VPMC
SEP 6	1200	17.0	14900	64200	2580000	44	55		72		97	94	98	100			VPWC
SEP 8	2630	14.0	5720	8 2 8 0	128000	38	48		60		78	91	99	100			VPWC
SEP 13	1445	17.5	3740	52200	527000	44	53		74		96	99	100				VPWC

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#### SAN JUAN RIVER BASIN

#### 09378700 COTTONWOOD WASH NEAR BLANDING, UTAH

LOCATION.--Lat 37°33'40", long 109°34'40", in NE4NW4 sec.23, T.37 S., R.21 E., San Juan County, at gaging station about 2 miles downstream from Brush Basin Canyon and 7 miles southwest of Blanding.

DRAINAGE AREA, -- 205 sq mi.

PERIOD OF RECORD. --Water temperatures: March 1968 to September 1970. Sediment records: March 1968 to September 1970.

EXTREMES. -- 1969-70:

Sediment concentrations: Maximum daily, 130,000 mg/l Aug. 20; minimum daily, no flow for many days. Sediment discharge: Maximum daily, 142,000 tons Aug. 20; minimum daily, 0 ton on many days.

Period of record:
Sediment concentrations: Maximum daily, 130,000 mg/l Aug. 20, 1970; minimum daily, no flow for many days each year. Sediment discharge: Maximum daily, 1,800,000 tons Aug. 1, 1968; minimum daily, 0 ton on many days each year.

REMARKS.--No flow Oct. 1, 2, Dec. 29 to Jan. 16, May 31 to June 6, June 15 to Aug. 2, 8-18, Aug. 26 to Sept. 4, 8-11, 15-30.

TEMPERATURE (°C) DE WATER, WATER YEAR DOTOBER 1969 TO SEPTEMBER 1970

		10	HF ENATURE	(-C) U		AILY MEAS		.707  0 35	FIENDER 1	710		
1AY	001	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ı		8.0				4.0		12.0				
2			0.0		2.0	6.0		8.0				
3	8.0	8.0				10.7		13.0				
4	6.0		2.0			8.5		14.0				
5		6.0			1.0	7.0		7.0				
6	15.0	8.0	2.0					15.0				
7					3.0	10.0		15.0				
9	19.0	8.0	2.7					16.0				
9					11.0	12.0			15.0			
10		6.3			4.0	4.0		7.0				
11	0.0					6.0		16.0				
12					3.0	7.0		8.0				
113	10.0	5.0	2.0					19.0				
14								10.0				
15	10.0	8.0	0.0		5.0	12.0	15.0	50.3				
16		6.0										
17	12.0	4.0	2.7		6.0							
18							7.0					
19		2.0	2.0		6.0		6.0	10.0				
20	12.0			2.)			7.0					
21		2.0	2.0		7.0		6.0					
22	15.0						7.0					
23	14.0	2.0	2.0	2.0	10.0		14.0					
24							15.0					
25	12.0	2.1	0.0	0.0								
26							13.0					
27	10.0			0.0			6.0					
28	8.0						10.0					
29			0.0				4.0					
30	8.0	5.0		1.0			10.0					
31												
AVG												

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, MATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

(METHODS OF ANALYSIS: 6, BOTTOM WITHDRANAL TURE; C. CHEMICALLY DISPERSED; N. IN NATIVE WATER; P. PIPFT; S. SITYL;

V. VISUAL ACCUMULATION TUBE; W. IN DISTILLED MATER)

			WATER TEM-								PART	ICLE S	517E					ME #1.00
	DATE	TIME	PERA- TURE	DISCHARGE	TRATION	DISCHARGE						IZE (						METHOD OF ANALY-
	DATE	LIME	( ()	(CFS)	(MG/L)	(TUNS/DAY)	.002	.004	.008	.016	.031	• 65	•125	.250	•500	1.00	2	212
FEB	9, 1970	1450	11.0	2.1	1610	9.1	15	20		30		5:	95	19	166			VPWC.
MAR	1	1625	4 • C	15	21200	859	17	22		30		44	79	98	16			VPKC
MAR	4	1610	8.5	4.6	2180	27	27	34		43		65	96	150				VPWC
APR	15	1625	15.0	.84	376	3.	21	30				67	93	100				VPWC
MAY	19	1000	10.0	1.6	478	2.1	26	38				58	97	100				VPWC
JUN	9	1630	15.0	.36	266	-26	71	87				92	97	100				VPWC
AUG	4	0650		9.5	14900	382	65	76				96	99	100				VPHC
	19	1755		1190	654000	2100000	6	6				25	57	93	100			VPWC
	19	2217		96	48500	12600	26	29				66	91	100				VPWC
AUG	20	1615		2.7	1050C	77	54	72				97	99	100				VPWC
AUG	20	1645		126	37100	29600	26	33				68	91	99	127			VPWC
	20	2300		779	181000	381000	13	14				36	76	96	100			VPWC
AUG	21	1910		18	17200	836	63	82				97	99	100				VPAC

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMU ATION TURF)

CARTICLE SIZE

		TEM- PERA- TURF	OF SAM- PLING	DISCHARGE		PERCEN	T FINE	R THAN		ICLE S		IMETER	S) IND	ICATED	j.	METHÓÐ OF ANALY~
DATE	TIME	( c)	POINTS	(CFS)	.062	.125	• 250	.500	1.00	2.0:	4.00	8. 0	16.0	32 • □	64.7	SIS
FEB 9, 1970	145C	11.0		2.1	1	15	51	72	81	86	94	99	100			5 V
MAR 4	1610	8.5		4.6	2	19	62	8.2	88	92	96	98	100			SV
APR 15	1625	15.0		.84	2	13	37	52	60	65	74	85	94	100		SV
MAY 19	1000	10.0		1.64	1	11	61	85	91	92	95	98	99	100		SV
JUN 9	1630	15.0		• 36	1	1	67	95	98	100						SV

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# 09378700 COTTONWOOD WASH NEAR BLANDING, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (TDNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	0 8.1 3.4 1.6	0 0 18700 3500 1940	0 0 409 32 B. 4	1.5 1.5 1.5 1.5 1.6	2610 1500 335 500 663	11 6.1 1.4 2.0 2.9	3.7 3.7 4.4 3.7 3.2	300 287 4180 8070 4500	3.0 2.9 50 81 39
6 7 8 9	1.5 1.5 1.4 1.4	37B 340 292 356 416	1.5 1.4 1.1 1.3 .94	2.3 2.9 1.6 .70 1.2	847 1600 2260 1900 1600	5.3 13 9.8 3.6 5.2	1.6 2.7 2.7 3.4 2.7	874 2600 4260 3860 3460	3.8 19 31 35 25
11 12 13 14 15	1.0 1.2 1.0 1.0	479 410 341 260 177	1.3 1.3 .92 .70	1.0 1.0 1.4 1.6	2080 2560 3040 1800 529	5.6 6.9 11 7.8 2.6	2.9 3.0 3.0 3.0 3.0	3070 2670 2270 1800 1230	24 22 18 15 10
16 17 18 19 20	1.4 1.6 1.4 1.6 1.8	188 199 231 263 296	.71 .86 .87 1.1	10 6.6 6.0 5.3 4.7	15500 7560 4600 1680 2700	419 135 75 24 34	3.0 3.0 3.0 2.9	2110 3000 3280 3560 3000	17 24 27 29 23
21 22 23 24 25	2.3 14 3.0 2.0 1.5	280 17800 4000 2400 688	1.7 673 32 13 2.8	5.0 4.7 4.4 4.4	3790 4600 5400 3100 892	51 58 64 37 11	2.7 2.7 2.5 2.9 2.3	2480 1700 986 1100 1220	18 12 6.7 8.6 7.6
26 27 28 29 30 31	1.5 1.5 1.5 1.5 1.5	570 454 547 520 487 1000	2.3 1.8 2.2 2.1 2.0 4.1	4.4 4.2 3.9 3.9 3.9	2000 3110 4210 5320 6430	24 35 44 56 68	2.3 1.0 1.0 0 0	950 680 410 0 0	5.9 1.8 1.1 0 0
TOTAL	64.74		1202-37	98.90		1229.2	79.0		560.4
		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	JANUARY  MEAN CONCEN- TRATION (MG/L)	SEOIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT OISCHARGE (TONS/DAY)	MEAN Discharge (cfs)	MARCH MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)
DAY 1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	OISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3 4	O O O	MEAN CONCEN- TRATION (MG/L) O O O	DISCHARGE (TONS/DAY) 0 0 0	DISCHARGE (CFS) 4.4 3.2 2.9 1.6	MEAN CONCEN- TRATION (MG/L) 1300 1180 1500 1900	OISCHARGE (TONS/DAY) 15 10 12 8.2	DISCHARGE (CFS) 10 6.0 4.0 5.3	MEAN CONCEN- TRATION (MG/L) 16000 18000 4620 2180	DISCHARGE (TDNS/DAY) 432 292 50 31
1 2 3 4 5 6 7 8	DISCHARGE (CFS)  0 0 0 0 0 0 0 0 0 0 0	MEAN CONCEN- TRATION (MG/L) D O O O O O O	DISCHARGE (TONS/DAY) 0 0 0 0 0 0 0	DISCHARGE (CFS)  4.4 3.2 2.9 1.6 1.2 1.2 1.2 1.1 1.6	MEAN CONCEN- TRATION (MG/L) 1300 1500 1500 1900 2200 2000 1790 1700 1600	OISCHARGE (TONS/DAY)  15 10 12 8.2 7.1 6.5 5.8 3.2 6.9	DISCHARGE (CFS) 10 6.0 4.0 5.3 4.7 3.9 3.9	MEAN CONCEN- TRATION (MG/L) 16000 4620 2180 2350 2350 2250 2660 3080	DISCHARGE (TDNS/DAY) 432 292 50 31 30 24 24 28 37
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)  D D D D D D D D D D D D D D D D D D	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (CFS)  4.4 3.2 2.9 1.6 1.2 1.2 1.0 1.6 47 588 70 1.6	MEAN CONCEN- TRATION (MG/L) 1300 1180 1500 1900 2200 2000 1790 1790 1600 2130 2050 1970 2030 2100	OISCHARGE (TONS/DAY)  15 10 12 8.2 7.1 6.5 5.8 3.2 6.9 2.7 3.2 6.9 7.9	DISCHARGE (CFS)  10 6.0 4.0 5.3 4.7 3.9 3.9 4.4 6.0 6.3 4.2 5.3 4.7	MEAN CONCENTRATION (MG/L) 16000 18000 4620 2180 2350 2660 3080 5500 4290 3080	OISCHARGE (TONS/OAY) 432 292 50 31 30 24 28 37 89 94 62 61 39
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN_CONCENT ATTION (MG/L)  O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (CFS) 4.4 3.2 2.9 1.6 1.2 1.2 1.2 1.70 1.6 .47 .58 .50 1.4 .58 .58 .58	MEAN CONCENT ATTION (MG/L) 1300 11800 11800 12000 22000 22000 27000 1790 1790 1790 2130 2050 2050 2050 2050 2050 2050 2050 20	OISCHARGE (TONS/DAY)  15 10 12 8.2 7.1 6.5 5.8 3.2 6.9 2.7 3.2 3.7 6.8 7.9 4.9 2.4 3.1	DISCHARGE (CFS) 10 6.0 4.0 5.3 4.7 3.9 3.9 4.4 6.0 6.3 4.2 5.3 4.7 4.7 4.7	MEAN CONCENT ATTOM (MG/L) 16000 18000 4020 2180 2250 2260 35500 55500 4290 31870 1500 1500 1500 1500 1500 1500 1500 15	OISCHARGE (TDNS/OAV)  432 292 50 31 30 24 24 24 28 37 89 94 61 39 20 16 19 19
1 2 3 4 5 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN_CONCENT (MG/L)  O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (CFS) 4.4 3.2 2.9 1.6 1.2 1.2 1.2 1.70 1.6 .47 .58 .70 1.6 1.4 1.6 1.6 1.70 1.7 1.6 1.7 1.6 1.7 1.7 1.6 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7	MEAN CONCENT ATTION (MG/L) 1300 11800 11800 12000 22000 22000 1790 1790 1600 2130 2050 2050 1970 2030 2160 1820 1490 1490 1490 1490 1490 1490 11750 1650 1750 1650	OISCHARGE (TONS/DAY)  15 10 12 8.2 7.1 6.5 5.8 3.2 6.9 2.7 3.2 3.7 8.8 7.9 4.9 2.4 3.1 5.8 15	DISCHARGE (CFS)  10 6.0 4.0 5.3 4.7 3.9 3.9 4.4 6.0 6.3 4.7 4.7 4.7 4.7 4.7 4.7 4.2 4.4	MEAN CONCENT ATTOM (MG/L) 16000 16000 4620 2180 2250 2260 2350 2660 3060 5500 1500 1500 1500 1500 1500 1500 1	OISCHARGE (TONS/DAY) 432 292 50 31 30 24 24 28 37 89 96 62 61 39 20 16 19 19 19 17 18 16 17

# 09378700 COTTONWOOD WASH NEAR BLANDING, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE. WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		SUSPEN	DED-SEDIMENT D	ISCHARGE. WATE	R YEAR OCT	DBER 1969 TO S	EPTEMBER 1970		
		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CDNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	4.4 3.9 4.2 3.9 4.2	1200 1200 1200 1200 1200	14 13 14 13 14	1.2 1.5 2.2 4.2 5.6	1130 1020 3250 3500 11900	3.7 4.1 19 40 180	0 0 0 0	0 0 0 0	0 0 0
6 7 8 9	4.2 4.2 3.7 3.7 3.2	1200 1200 1000 1000	14 14 10 10 8.6	5.6 4.2 3.2 2.5 2.3	3980 3290 2210 1760 1310	60 37 19 12 8-1	0 •25 1•0 •37 •70	200 500 266 862	0 .14 1.4 .27 1.6
11 12 13 14	3.2 2.5 1.8 1.4 1.0	1000 700 400 400 376	8.6 4.7 1.9 1.5 1.0	2.0 2.0 1.8 1.6	863 2030 1500 2130 2660	4.7 11 7.3 9.2	6.0 2.5 1.0 .50	9000 4000 1000 500 0	146 27 2.7 .68 0
16 17 18 19 20	3.2 20 17 7.0 2.0	500 10400 8000 3040 1420	4.3 562 367 57 7.7	1.6 1.6 1.6 1.6	2110 1560 1000 450 500	9.1 6.7 4.3 1.9	0 0 0 0	0 0 0 2 0	0 0 0
21 22 23 24 25	2.0 2.0 2.0 3.0 5.0	1990 3240 3130 751 1300	11 17 17 6-1 18	1.0 .84 .84 1.0 1.4	500 500 500 500 500	1.4 1.1 1.1 1.4 1.9	0 0 0 0	0 0 0 0	0 0 0
26 27 28 29 30 31	4.5 4.0 3.9 2.5 1.8	1940 11300 2370 2490 3160	24 122 19 17 15	1.4 1.4 1.6 1.4 1.0	500 500 500 500 500	1.9 1.9 2.2 1.9 1.4	0 0 0 0	0 0 0 0	0 0 0 0
TOTAL	128.5		1406.4	60.98		464.9	12.32		179.79
		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	JULY MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN EDNCEN- Tration (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN DISCHARGE (CFS)	SEPTEMBER  MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)
DAY 1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3 4	DISCHARGE (CFS) 0 0 0	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 0 0 0	01SCHARGE (CFS) 0 0 39 30	MEAN CDNCEN- TRATION (MG/L) 0 3700 13500	DISCHARGE (TDNS/DAY) 0 0 390 1090	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 8	DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS) 0 0 39 30 5-0 1-0 -50 0	MEAN CDNCEN-TRATION (MG/L)  0 0 3700 13500 4000 250 0 0 0	DISCHARGE (TDNS/DAY)  0 0 390 1090 54 1.4 .34 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN CONCENTRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 5630  421 11 0 0
1 2 3 4 5 6 7 8 9 10 11 12 13	DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	015CHARGE (CFS) 0 0 39 30 5.0 1.0 .50 0 0	MEAN CDNCENTRATION (MG/L)  0 3700 13500 4000 500 250 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TDNS/DAY)  0 0 390 1090 54  1.4 .34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (CFS)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN CONCENTRATION (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TONS/DAY)  0 0 0 0 0 5630  421 11 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS)	MEAN_CONCENT OF TABLE	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 39 30 5.0 1.0 .50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN_CONCENTRATION (MG/L)  0 0 3700 13500 250 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TDNS/DAY)  0 0 390 1090 54 1.4 .34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (CFS)  0 0 0 97 6.0 1.0 0 0 0 8.6 8.6 8.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN_CONCENT   100	OSCHARGE (TONS/DAY)  OOO OOO OSGOOD OOOOOOOOOOOOOOOOOOOOOOO
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS)	MEANN-TRATION IMG/L)  O O O O O O O O O O O O O O O O O O O	DISCHARGE (TONS/DAY)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 15CHARGE (CFS) 0 0 39 30 5.0 1.0 .50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN_TRATION (MG/L)  0 0 3700 13500 4000 500 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (TDNS/DAY)  0 0 390 1090 54  1.4 .34 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DISCHARGE (CFS)  0 0 0 0 7 6.0 1.0 0 0 0 8.6 8.6 8.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MEAN_CONCENT (MG/L)  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	OSCHARGE (TONS/DAY)  OSCHARGE

#### 09379500 SAN JUAN RIVER NEAR BLUFF, UTAH (Irrigation network station)

LOCATION. --Lat 37°09'04", long 109°52'00", in SE¼NW¼ sec.7, T.42 S., R.19 E., San Juan County, at bridge on State Highway 47, 1,800 ft downstream from gaging station, 20 miles southwest of Bluff, and 114 miles upstream from

DRAINAGE AREA. -- 23,000 sq mi, approximately (at gaging station).

PERIOD OF RECORD. --Chemical analyses: February to June 1927, October 1929 to September 1969 (daily), October 1969 to September 1970 (monthly).

Water temperatures: May 1944 to September 1961, October 1964 to September 1970.

Sediment records: August to September 1928, July 1929 to September 1970.

-210 -21G

KEMBES. -- LYDS-- 70: Specific conductance: Maximum daily, 1,810 micromhos Aug. 11; minimum daily, 351 micromhos May 17. Water temperatures: Maximum, 30,5°C Aug. 3; minimum, 1,0°C on many days during December and January. Sediment concentrations: Maximum daily, 80,000 mg/l Oct. 23; minimum daily, 245 mg/l Aug. 3. Sediment discharge: Maximum daily, 3,210,000 tons Sept. 6; minimum daily, 344 tons Aug. 3.

Dissolved Solids (1929-69): Maximum, 1,880 mg/l July 21-31, 1934; minimum, 152 mg/l June 11-20, 1952. Hardness (1928-69): Maximum, 1,030 mg/l Aug. 29, 1969; minimum, 102 mg/l July 1-6, 8-10, 1957. Specific conductance (1941-70): Maximum daily, 2,790 micromahos Sept. 19, 1959; minimum daily, 208 micromhos

June 17, 1952.
Water temperatures: Maximum, 33.5°C July 31, 1959; minimum (1944-61, 1965-70), freezing point on many days during winter periods.
Sediment concentrations: Maximum daily, 383,000 mg/l Sept. 21, 1929; minimum daily, no flow for several days

in 1934 and 1939.

Sediment discharge: Maximum daily, 12,000,000 tons Oct. 14, 1941; minimum daily, 0 ton on several days during July 1934 and August 1939.

DATE	TIME	DIS- CHARGE (CFS)	SILICA (S102) (MG/L)	OIS- SCLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCD3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
CCT.												
01 Jan.	1530	1590	11	78	18	45	3.3	168	0	194	12	. 4
19 FEB.	1430	990	9.8	99	30	80	3.1	1 80	0	378	22	.4
10 MAR.	1430	2360	9.1	56	14	35	1.9	124	0	1 42	11	.4
04	1115	2460	8.8	65	21	47	2.7	144	0	199	20	•2
16 APR.	1200	1700	8.6	60	17	42	2.3	131	ō	183	12	.3
16 MAY	1020	796	8.8	87	32	69	2.8	169	0	327	22	.4
18 JUNE	1645	4020	6.5	57	15	24	1.9	170	0	105	7.2	.3
10 JULY	0830	2450	7.4	66	16	39	2.5	125	0	1 84	12	-4
16 AUG .	1420	1080	8.3	79	21	46	2.7	147	0	227	16	.5
03 SEP.	1455	438	6.2	84	30	80	3.6	140	0	336	22	•8
01	1415	767	8.0	107	28	69	3.9	152	8	358	20	.7
C4	1600	638	16	103	32	76	4.9	194	ŏ	2 32	120	.5
06	1200	52800	12	66	14	98	6.0	330	ŏ	135	18	,6
07	1800	46000	15	116	22	142	8.2	275	ŏ	545	14	.8
C9	1700	4640	11	75	12	54	4.9	189	0	192	16	.7
13	1000	10800	20	162	24	80	6.7	292	0		20	.5
16	1700	5180	10	72	10	34	3 • 5	202	0		10	•2

DATE	NITRATE (N) (MG/L)	DIS- SCLVEO BORDN (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIOS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER OAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
CCT.											
01 JAN.		90	469	446	.64	2010	268	1 30	1.2	687	6.8
19		90	724	717	.98	1940	371	223	1.8	970	8.2
FEB. 10		50	356	332	.48	2270	196	94	1.1	533	7.1
MAR.		,,,							•••	,,,,	
04		110	444	438	.60	2950	246	128	1.3	642	7.4
16 APR.		70	406	391	. 55	1860	220	112	1.2	595	8.1
16	~-	80	646			635					
MAY	~-	80	040	635	.88	655	348	209	1.6	892	7.9
18		70	269	306	.37	2920	202	63	.7	413	8.0
JUNE											
JULY	~-	50	424	391	.5€	2810	230	128	1.1	614	7.9
16 AUG.	•50	60	506	475	.69	1480	284	163	1.2	719	8.2
03	.03	110	707	632	• 96	836	333	218	1.9	925	8.2
SEP.											
01	90	50	7 C B	682	.96	1470	382	244	1.5	957	8.4
04			732	68C	1.00	1260	388	70	1.7	990	7.9
06			572	512	.78	81500	222	0	2.9	821	7.4
07			960	999	1.31	119000	380	154	3.2	1310	7.4
09			488	459	.66	6110			1.5	710	7.4
13			772		1.05	22500	502	262	1.6	1030	7.2
16			404		• 55	5650	220	54	1.0	590	7.7

# 09379500 SAN JUAN RIVER NEAR BLUFF, UTAH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					(ONCE-DA	ILY MEAS	JREMENT)					
DAY	DC T	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	667	667	832	505	538	544	848	914	451	497		942
2	686	673	932	612	541	571	971		425	516	899	969
3	746	650	944	593	530	626	861	914	433	547	947	966
4	1230	765	790	585	528	648	906	952	456		982	984
5	965	719	686	457	533	638	1010	961	455	635	1130	
6	812	664	685	615	533	613	1060	1020		694	1320	721
7	721	670	681	611	527	591	1010		455	843	1270	1250
8	704	654	679	594	548	561	986	1030	557	803		638
9	710	633	662	599	540	565	963	777	663	1130	1290	638
10	686	635	677	718	539	552	970	623	604	803	1050	672
11	653	662	667	892	537	563	938	591	613		1810	675
12	641	662	658	924	537	642	944	608	685	738	1420	
13	639	656	641	933	558	652	935	643		673	1090	925
14	645	653	643	961	550	632	945	623		673	1010	871
15	627	644	659	914	536	615	904	511	616	690		796
16	633	6 32	647	961	559	606	901		612	733	1110	505
17	641	674	659	921	553	607	866	351	604	758	1170	487
1.8	637	728	657	969	542	508		362	5 8 5		1010	525
19	631	728	716	969	526	598	866	373	575	794	1080	
20	657	698	679	991	507	586	942	377	533	821	1510	574
2 I	629	804	692	1020	499	614	1020	401	506	853	950	587
22	864	727	693	1030	501	587	1000		465	925		613
23	1220	709	682	1020	513	580	1019	421	450	866	1430	585
24	1090	699	669	1030	510	575	1070		453	891	991	574
25	866	665	664	1030	529	581			476		883	582
26	793	667	660	1020	523	576	1000		504	893	847	
27	713	662	641	1012	513	571	993		456	864	848	582
28	682	649	654	1000	511	564	1000			843	848	589
29	734	643	667	1030		677	1112		465	853		594
30	676	661	653	1000		771	1050		478	836	923	597
31	769		631	592		813				844	934	
AVG	754	678	693	842	531	610	964		5 <b>2</b> 2	778	1110	706

# CONCE-DAILY MEASUREMENT)

DAY	CCT	NOV	DEC	JAN	FE8	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	9.0	5.0	1.0	3.0	7.0	7.5	11.5	20.5	25.0		24.0
2	20.0	8.0	4.0	1.0	3.0	6.0	9.5	11.0	21.0	25.0	27.5	24.0 24.0
3	14.0	8.0	4.0	1.0	3.0	7.5	9.5	16.0	19.0	26.5	30.5	23.5
4	12.0	8.0	4.0	1.0	4.0	7.5	10.0	19.5	19.0	20.5	26.5	
5	10.0	8.0	4.0	1.0	4.0	7.5	11.0	18.0	17.0	23.5	27.5	20.0
							11.0	10.0	27.0	23.7	21.3	
6	13.0	9.0	4.0	1.0	5.0	8.0	13.0	19.0		28.0	28.0	14.5
7	14.0	9.0	3.0	1.0	6.0	9.0	12.0		17.5	27.0	28.5	17.0
8	14.0	9.0	3.0	1.0	6.0	9.5	13.0	18.0	20.5	26.5	20.5	18.0
9	15.0	9.0	4.0	1.0	6.0	9.5	14.0	16.0	18.0	25.0	27.0	18.5
10	15.0	10.0	3.0	1.0	6.5	8.0	15.0	16.0	17.0	23.0	28.0	18.0
					•••	0.0	23.0	10.0	11.0	23.0	20.0	18.0
11	12.0	10.0	4.0	1.0	6.5	8.5	13.0	16.0	18.0		29.0	19.5
12	10.0	10.0	3.0	1.0	6.5	8.0	9.5	17.0	10.0	22.5	29.0	1707
13	13.0	10.0	3.0	1.0	7.0	8.5	10.5	17.5		27.0	28.0	17.5
14	12.0	10.0	3.0	2.0	6.5	7.5	9.5	17.0		27.0	27.0	18.0
15	13.0	10.0	3.0	3.0	5.5	8.5	10.5	17.0	20.5	28.5		16.5
										2007		10.7
16	12.0	9.0	3.0	4.0	5.5	9.5	11.0		22.5	27.0	27.0	15.5
17	12.0	7.0	4.0	4.0	6.0	8.0	8.5	16.0	23.0	28.5	26.0	15.5
18	14.0	7.0	3.0	5.0	5.0	5.0		19.0	24.0		25.0	16.0
19	12.0	7.0	3.0	4.0	5.0	6.5	10.0	17.0	24.0	28.5	23.5	
20	12.0	8.0	4.0	5.0	4.5	5.5	11.0	16.0	26.0	29.0	22.0	16.0
21	11.0	7.0	4.0	5.0	4.5	7.0	10.0	16.5	22.5	26.0	22.5	17.0
22	11.0	8.0	3.0	6.0	5.5	7.0	10.0	16.5	25.5	25.0		15.5
23	11.0	6.0	4.0	6.0	7.0	10.0	11.5		25.5	24.0	21.0	15.0
24	11.0	6.0	5.0	4.0	8.0	10.5	13.0	15.5	26.0	23.0	25.0	15.0
25	12.0	6.0	5.0	5.0	8.0	10.0		18.5	26.5		24.0	13.0
26	11.0	6.0	4.0									
27	12.0	6.0	5.0	6.0	8.0	7.5	13.0	18.0	29.0	23.0	24.5	
28	13.0	5.0	3.0	6.0	6.5	7.0	12.0	18.0	25.0	25.0	25.0	15.5
29	10.0	5.0	2.0	4.0	7.0	4.5	9.5	18.5		28.0	24.0	13.0
30	9.0	5.0	2.0	4.0 3.0		7.0	10.0	21.0	24.0	27.0		15.0
31	10.0	9.0 	1.0			9.0	10.0		24.0	29.0	24.0	16.0
31	13.0		1.0	2.0		7.5		18.0		29.0	23.5	
AVG	12.5	8.0	3.5	3.0	5.5	8.0	11.0	17.0	22.0	26.0	26.0	17.0

# 09379500 SAN JUAN RIVER NEAR BLUFF, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE. WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1590	1260	5410	2400	5250	34000	981	944	2500
ş	1550	1300	5440	5350	4850	30400	981	944	2500
3	4380 7420	21400 38000	253000 761000	2240 2150	5340 4310	32300 25000	1230 1790	1570 3100	5210 15000
5	4210	25000	284000	2080	4130	23201	1940	3630	19000
6	2700	16900	123000	2140	4310	24900	1980	3700	19800
7	2390 2330	15000 10200	96600 64200	2100 2070	4200 4100	23804 22900	1950 1910	3630 3510	19100 18100
9	2340	5060	32000	2090	4090	23100	1870	3330	16800
10	2341	5460	34500	2070	4100	22900	1890	3390	17300
11 12	2411 2520	5250 5730	34000 39000	2070 2010	4100 3890	22900 21100	1870 1820	3220 3230	16800 15800
13	2490	7480	50300	1940	3610	18900	1800	3130	15200
14 15	2380	5240	33700	1910	3510	18100	1820	3220 3260	15800
	2310	6320	39400	1890	3490	17800	1840		16200
16 17	2280 2240	4790 4540	29500 27500	1910 2090	3510 5680	18100 37700	1860 1860	3290 3290	16500 16500
14	2240	4630	28000	2180	4490	26409	1870	3330	16800
19 20	2260 2290	4670 11000	28500 67700	2040 1700	3990 2830	22000 13000	1840 1870	3260 3330	16200 16800
27 21	2390 9740	29200 29200	33900 768000	1340 1710	2860 2860	458n 13200	1840 1830	3260 3220	16200 15 <b>9</b> 00
23	13800	40000	2980000	1980	3700	19800	1880	3470	17600
24 25	4970 3310	50000 39000	671000 349000	2010 1970	3890 3680	21100 19600	1860 1830	3290 3220	1650n 15900
26	2820	6960	53000	1970	3680	19600	1860	3290	16500
27	2680	8709	63000	1960	3670	19400	1870	3330	16800
28	2570 2610	8700 8700	50400 61300	1940 1910	3630 3510	1900n 18100	1820 1750	3220 2980	15800 14100
30	2790	8700	65500	1360	1850	6790	1790	3080	14900
31	2510	×700	59000				1710	2860	13200
TOTAL	104840		7251050	59550		641670	55012		471310
		JANHARY			FERRUARY			MARCH	
	MEAN	MF AN	CENTHENT	MEAN	MEAN	CEDIMENT	MEAN	MEAN	CEDIMENT
DAY	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN Dischaugf (CFS)		SEDIMENT DISCHARGE (TONS/DAY)
1	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) 2430	DISCHARGE (TONS/DAY) 12900	DISCHARGE (CFS) 2340	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 27800	DISCHAMGF (CFS) 2320	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 30400
• • • •	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 12900 14000	DISCHARGE (CFS) 2340 2370	MEAN CONCEN- TRATION (MG/L) 4400 5030	DISCHARGE (TONS/DAY) 27800 32200	DISCHAMGF (CFS) 2320 2520	MEAN CONCEN- TRATION (MG/L) 4850 5730	DISCHARGE (TONS/DAY) 30400 39000
1 2 3 4	DISCHARGE (CFS) 1690 1740 1680 1690	MFAN CONCEN- TRATION (MG/L) 2430 2480 2420 2430	DISCHARGE (TUNS/DAY) 12900 14000 12400 12900	DISCHARGE (CFS) 2340 2370 2340 2310	MEAN CONCEN- TRATION (MG/L) 4400 5030 5060 3520	DISCHARGE (TONS/DAY) 2780n 3220n 3200n 22000	DISCHAMGF (CFS) 2320 2520 2480 2480	MEAN CONCEN- TRATION (MG/L) 4850 5730 5600 3310	DISCHARGE (TONS/DAY) 30400 39000 37500 22200
] 2 3 4 5	DISCHARGE (CFS) 1690 1740 1680 1690 1620	MF4N CONCEN- TR4TION (MG/L) 2430 2480 2420 2830 2560	015CHARGE (TONS/DAY) 12900 14000 12400 12900 11200	2340 2370 2340 2370 2310 2370	MEAN CONCEN- TRATION (MG/L) 4400 5030 5060	DISCHARGE (TONS/DAY) 27800 32200 32000	DISCHAMGF (CFS) 2320 2520 2480	MEAN CONCEN- TRATION (MG/L) 4850 5730 5600	DISCHARGE (TONS/DAY) 30400 39000 37500
1 2 3 4 5	DISCHARGE (CFS) 1690 1740 1680 1690 1620	MEAN CONCEN- TRATION (MG/L) 2430 2420 2420 2550 2790 2650	DISCHARGE (TUNS/DAY) 12900 14000 12400 12900	DISCHARGE (CFS) 2340 2370 2340 2310 2370	MEAN CONCEN- TRATION (MG/L) 4400 5030 5060 3520 5080	019CHARGE (TONS/DAY) 27800 32200 32000 22000 32500	DISCHARGE (CFS) 2320 2520 2480 2480 2380	MEAN CONCEN- TRATION (MG/L) 4850 5730 5600 3310 4390	DISCHARGE (TONS/DAY) 30400 39000 37500 22200 28200
1 2 3 4 5	DISCHARGE (CFS) 1690 1740 1680 1690 1620 1670 1650 1600	MF4N CONCEN- TRATION (MG/L) 2430 2420 2830 2540 2790 2650 2750	DISCHAMGE (TONS/DAY) 12900 12400 12400 12900 11200 12600 11800 10900	DISCHARGE (CFS)  2340 2370 2340 2310 2370 2370 2370 2370	ME AN CONCENTRATION (MG/L)  4400 5030 5060 3520 5080 3010 5060 4850	015CHA46E (TONS/DAY) 27800 32200 32000 22000 32500 19300 32000 30400	DISCHAPGF (CFS) 2320 2520 2480 2480 2390 2370 2370 2370 2340	MEAN CONCEN- TRATION (MG/L) 4850 5730 5500 3310 4390 4440 4850 5060	DISCHARGE (TONS/DAY) 30400 39000 37500 22200 28200 28400 30400 32000
1 2 3 4 5	DISCHARGE (CFS) 1690 1740 1680 1690 1620	MEAN CONCEN- TRATION (MG/L) 2430 2420 2420 2550 2790 2650	DISCHARGE (TUNS/DAY) 12900 12400 12400 12900 11200 12600 11800	DISCHARGE (CFS) 2340 2370 2340 2310 2370 2370 2370	MEAN CONCEN- TRATION (MG/L) 4400 5030 5060 3520 5080 3010 5060	015CHAY5E (TONS/DAY) 27800 32200 32000 32500 19300 32000	DISCHAMGF (CFS) 2320 2520 2480 2480 2390 2370 2370	MEAN CONCEN- TRATION (MG/L) 4850 5730 5600 3310 4390 4440 4850	DISCHARGE (TONS/DAY) 30400 39000 37500 22200 28200 28400 30400
1 2 3 4 5 6 7 9 10	DISCHARGE (CFS) 1490 1740 1640 1620 1670 1650 1670 1650 1690 311	MFAN CONCENTRATION (MG/L) 2430 2430 2550 2750 2750 2650 459 7520 477	DISCHAMGE (TUNS/DAY)  12900 14000 12400 12400 11200 11800 11800 10900 3500 14400	DISCHAPGE (CFS)  2340 2370 2340 2310 2370 2340 2340 2360 2360	MEAN CONCENTRATION (MG/L)  4400 5030 5060 3350 5080 4850 4850 4930 5080 5080	DISCHARGE (TONS/DAY) 2740n 3220n 3200n 3200n 3250n 1 430n 3040n 2550n 32400	DISCHARCE (CFS) 2320 2570 2480 2380 2370 2370 2370 2370 2370 2370 2370 237	MEAN CONCENTRATION (MG/L) 4850 5730 5600 3310 4390 4450 5060 3520 4790 2460	DISCHARGE (TONS/DAY)  30400 39000 37500 22200 28200 28200 28400 30400 322000 225000 225000
1 2 3 4 5 6 7 9 10	DISCHARGE (CFS) 1490 1740 1680 1620 1670 1650 1670 1650 1690 111 473	MFAN CONCEN- TRATION (MG/L) 2430 2480 2420 2830 2560 2750 2650 2750 1190 639	015CH4MGE (TUNS/DAY) 12900 14000 12400 12900 11200 11200 11800 10900 1400 1760 1760 2300	DISCHAPGE (CFS)  2340 2370 2340 2310 2370 2340 2310 2370 2340 2360 2360 2360 2360	MEAN CONCENTATION (MG/L) 4400 5030 5060 3520 5080 4050 4050 5080 5080 5080 5080 508	DISCHARGE (TONS/DAY) 27400 32200 32000 22000 32500 37500 37400 32400 32400	DISCHARGE (CFS) 2320 2520 2480 2480 2390 2370 2370 2340 2320 2340 2360	MEAN CONCEN- TRATION (MG/L) 4850 5730 5600 3310 4390 4440 4850 5060 3520 4790 2460 3080	DISCHARGE (TONS/DAY) 30400 39000 37500 22200 28200 28400 30400 32000 27500 13000 14900
1 2 3 4 5 5 6 7 9 10 11 12 13 14	DISCHARGE (CFS) 1490 1740 1640 1650 1650 1670 1670 1460 11990 411 473 955	MFAN CONCENTRATION (MG/L) 2430 2480 2420 2830 2560 2790 2650 7520 1190 639 747 492 796	015CHAMGE (TUNS/DAY) 12900 14000 12900 11200 11200 11600 11600 11600 1400 1400 1760 2300 2000 2520	2340 2370 2340 2370 2340 2310 2310 2340 2340 2340 2360 2360 2360 2360 2360 2360 2360 236	MEAN CONCENTATION (MG/L) 4400 5030 5060 3520 5080 4050 4050 5080 5080 5080 5080 508	DISCHARGE (TONS/DAY) 27800 32200 22000 22000 22500 13000 32500 32500 32600 32400 32400 32400 24200 34000	DISCHAMGE (CCFS) 2320 2570 2480 2480 2390 2370 2320 2320 2320 2320 2320 2320 232	MEAN CONCEN- TRATION (MG/L)  4850 5730 5730 4390 4450 4750 5060 33710 4390 4450 4750 4790 2460 3080 1830 2890	01SCHAPGE (TONS/DAY) 30400 39000 37500 22200 22200 22200 22000 22500 10000 14900 8700 13400
1 2 3 4 4 5 5 6 7 9 10 11 12 13 14 15	DISCHARGE (CFS) 1440 1740 1440 1650 1650 1670 1670 1470 1470 1470 1470 1990 411 473 955	MF AN CONCENTRATION (MG/L)  2430 2420 2430 2560 2760 2750 2650 2650 2750 37520 1190 639 747 492 796	015CMAMGE (TOMAMGE) 12900 12900 12900 12900 12900 11200 12600 11600 1300 1400 1760 2300 2000 2300	DISCHAPGE (CFS) (C	MEAN CONCENTRATION (MG/L)  4400 5030 5060 3520 5080 5080 5080 5080 5080 5080 5080 5	DISCHAUGE (TONS/DAY) 27800 32200 22000 22000 22500 19300 32500 19300 32400 25500 12400 32400 24200 34000 37500	DISCHAMEF (CFS): 2320 2520 2520 2630 2480 2390 2370 2370 2370 2370 2370 2370 2370 2770 27	MEAN CDNCENTRATION (MG/L) 4850 5500 3310 4390 4440 4850 5660 3570 4790 2460 3670 2890 2890	01SCHAPGE (TONS/DAY) 30400 30000 37500 22200 28400 32000 22000 22000 24500 13000 13000 8700 13400
1 2 3 4 5 5 6 7 9 10 11 12 13 14 15 16	DISCHARGE (CFS) 1499 1749 1749 1649 1649 1670 1670 1670 1670 1670 1990 411 473 955 930 941	MFAN CONCENTRATION (MG/L) 2430 2450 2450 2550 2550 7520 1190 755 796 751 492 922	015CMAMGE (TONS/PAY) 12900 14000 12400 12400 12400 11800 11800 1500 1500 1400 1760 2300 2400	D1SCHAPGE (CCF) 2340 2370 2340 2310 2310 2310 2370 2340 2360 2360 2360 2360 2360 2440 2440 2420	MEAN CONCENT AT 10 MG/L)  400 5030 5060 3520 5060 3520 5080 5080 5080 5080 5080 5080 5080 5	DISCHARGE (TONS/DAY)  27dan 32200 32200 22000 22000 32500  1 4300 32000 32400 32400 32400 32400 32400 32500 37500 37500	DISCHAMEF (CFS) 2320 2570 2480 2480 2390 2370 2370 2320 2340 2370 2170 1770 1770 1770	MFAN CONCENTRATION (MG/L) 450 5730 5600 3310 4590 45060 3570 4790 2460 3080 2890 2890 2920	01SCHAPGE (TONS/DAY) 30400 39000 37500 22200 28400 30400 32000 22900 27500 13000 14900 8700 13400 13400 13400
1 2 3 4 5 5 6 7 7 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 1690 1740 1740 1640 1640 1650 1670 1670 1670 1971 473 955 930 941 955	MF AN CONCENT OF THE PROPERTY	015CMAMGE (TONS/DAY) 12900 14000 12400 12400 12400 11200 11200 11400 1500 1500 1400 2500 2500 2500 2520 2520 2520	D1SCMAPGE (CCF) 2340 2370 2340 2310 2310 2370 2340 2360 2360 2360 2360 2360 2360 2360 236	MEAN CONCENT AT 10 MEAN (MG/L)  4400 5030 5060 3520 5080 4030 5060 4430 5080 5080 5080 5080 5080 5080 5080 50	DISCHARGE (TONS/DAY)  27dan 32200 32200 32000 22000 32500  1 4300 32400 32400 32400 32400 32400 32400 32500 37500 27000 37500	DISCHAMEF (CFS) 2320 2570 2480 2480 2390 2370 2370 2320 2340 2370 2170 1770 1770 1770 1770 1770	MEAN CONCENTRATION (MG/L)  4850 5730 5500 3310 4390 4490 4450 3570 3570 3670 3670 3670 3670 3670 3670 3670 36	01SCHAPGE (TONS/DAY) 30400 30400 30500 20200 28400 30400 32000 22500 29500 13000 14900 8700 13400 13400 13400 13400 13400 13400 5860 8940
1 2 3 4 5 6 7 9 9 10 11 12 13 14 15 16 17	DISCHARGE (CFS) 1590 1740 1740 1640 1620 1470 1650 1660 1990 411 473 465 991	MF AN CONCENT (CONCENT AT 110 N (MG/L) 2430 2430 2550 2550 2550 2550 2550 2550 2550 25	015CHAME 12900 12900 12400 12400 12400 12500 11600 11600 11600 11600 12600 12600 12600 12760 127	DISCHAPGE (CF) (CF) (2340 2370 2340 2310 2370 2340 2340 2340 2340 2340 2340 2340 234	MEAN CONCENT AT 10 MEAN (MG/L)  4400 5060 3520 5040 3110 5060 4950 4950 4950 4950 4960 5580 4960 5580 4960 5580 4960 5580 4960 5660 3940 4980 4980	DISCHARGE (TONS/DAY) 27800 32200 32200 22000 22500 1 +300 32500 1 +300 32400 25500 12400 24200 34400 24200 36000 37500 27000 23800 23800 23800 23800 23800	DISCHAMEF (CFS) (CFS) (CFS) (CFS) (2320 2570 2480 2480 2390 2370 2370 2370 2370 2370 2370 2370 2770 1770 1770 1770 1770 1770 1770 17	MF AN CONCENTRATION (MG/L)  4850 5730 5600 3310 4390 4450 5060 3570 4790 2660 1830 2890 2890 2920 1270 1870 4670 4670	01SCHAPGE (TONS/DAY) 30400 39000 37500 22200 28400 30400 30400 22000 27500 13000 14900 8700 13400 13400
1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS) 1490 1740 1740 1640 1620 1470 1650 1660 1190 411 473 955 930 944 941 955	MF AN CONCENT OF THE AT I ON (MG/L)  2430 2420 2430 2550 2550 2550 2550 2550 2550 2550 25	015CMAMGE 12900 12900 12900 12900 12900 12900 11200 12600 11800 10900 3500 1400 2520 2300 2400 2520 2510 2650	D1SCHAPGE (CF) 2340 2370 2340 2310 2370 2340 2310 2340 2340 2340 2340 2340 2340 2440 244	MEAN CONCENT AT 100 MEAN (MG/L)  4400 5030 5060 3520 5080 4950 4950 4950 4950 4950 4950 4950 4960 5580 4960 5580 4960 5580 4960 5580 4960 5580 4960 5580 4960 5580 4960 5580 4960 5580 4960 5660 5580 4960 5580 4960 5660 5660 5660 5660 5660 5660 5660 5	DISCHARGE (TONS/DAY) 27800 32200 32200 22000 22000 32500 1 4300 32400 32400 32400 32400 32400 34000 37500 27000 37000 27000 23800 24900 24	DISCHAMEF (CFS) 2320 2570 2480 2480 2390 2370 2370 2370 2390 2590 1770 1770 1770 1770 1770 1770 1680	MFAN CONCENTRATION (MG/L)  4850 5730 5600 3310 4390 4450 5660 3570 4790 2660 1830 2890 2890 1270 1870 4670 4370	01SCHAPGE (TONS/DAY) 30400 39000 37500 22200 28400 30400 32000 27500 13000 14900 8700 13400 13400 13400 13400 13400 13400 13400 13400 14900 8740 14900 8740 14900 8740 14900 8740 14900 8740 14900 8740 8740 8740 8740 8740 8740 8740 87
1 2 3 4 5 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 1590 1740 1740 1640 1620 1670 1670 1670 1690 411 473 455 491 495 491 1970 998	MF AN CONCENT AT 10 M (MG/L)  2430 2470 2430 25540  2790 2650 7520 7520 7520 7520 7520 7520 7520 75	015CMANGE (TOWAY)AY) 12900 12900 12900 12900 12900 11200 12600 11800 13500 1400 1400 1760 2300 2400 2520 2410 2650 2590	D1SCHAPGE (CCF) 2340 2370 2340 2310 2370 2340 2310 2340 2340 2340 2340 2340 2340 2340 2440 24	MEAN CONCENT (MG/L)  4400 5030 5060 3520 5080 4550 4550 4550 4550 4550 4550 455	DISCHARGE (TONS/DAY)  27800 32200 32200 22000 32500  1 3300 32600 32400 32400 32400 32400 32400 32400 32400 32400 32400 32400 32900 31300 21900 21900 29200 29200 29200	DISCHAMEF (CFS) 2320 2570 2480 2480 2390 2370 2370 2370 2370 2370 2370 2370 2770 1770 1770 1770 1770 1770 1770 17	MFAN CONCENTRATION (MG/L)  4850 5730 5600 3310 4390 4450 5660 3570 4790 2660 1270 1270 1270 1270 1270 1390 1390 1390	015CHAPGE (TONS/DAY) 30400 39000 37500 22200 28400 30400 30400 22000 22500 13000 14900 13400 13400 13400 13400 13400 13400 13400 13400 1980 8940 21400 1980 5050 6270
1 2 3 4 5 5 6 7 7 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS) 1690 1740 1740 1640 1640 1650 1670 1670 1670 1670 1970 173 173 173 175 170 170 170 170 170 170 170 170 170 170	MF AN CONCENT OF THE PROPERTY	015CMANGE (TONS/DAY) 12900 14000 12400 12400 11200 11200 11200 11400 11600 3500 1400 2500 2400 2520 2410 2650 2650 2650 2650 2650 2650 2650 265	D1SCMAPGE (CCF) 2340 2370 2340 2310 2310 2370 2340 2310 2360 2360 2360 2360 2360 2360 2360 236	MEAN CONCENT AT 10 MEAN TO A 10	DISCHARGE (TONS/DAY)  2740n 3220n 3220n 3200n 22000 32500  1 4300 32400 32400 32400 32400 32400 32400 32400 32500 37500 27000 37500 27000 32900 27900 29200 24500 27900	DISCHAMEF (CFS) 2320 2570 2480 2480 2390 2370 2340 2370 2340 2370 2770 1770 1770 1770 1770 1770 1770 17	MEAN CONCENTRATION (MG/L)  4850 55730 5500 3310 4390 4450 5560 3570 310 5500 310 310 310 310 310 310 310 310 310 3	01SCHAPGE (TONS/DAY) 30400 30400 30900 37500 22200 28400 30400 32000 22900 27500 13000 14900 13400 13400 13400 13400 13400 13400 13400 5860 8940 21400 19800 5050 6270 7620
1 2 3 4 5 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS) 1590 1740 1740 1640 1620 1670 1670 1670 1690 411 473 455 491 495 491 1970 998	MF AN CONCENT AT 10 M (MG/L)  2430 2470 2430 25540  2790 2650 7520 7520 7520 7520 7520 7520 7520 75	015CMANGE (TOWAY)AY) 12900 12900 12900 12900 12900 11200 12600 11800 13500 1400 1400 1760 2300 2400 2520 2410 2650 2590	D1SCHAPGE (CCF) 2340 2370 2340 2310 2370 2340 2310 2340 2340 2340 2340 2340 2340 2340 2440 24	MEAN CONCENT (MG/L)  4400 5030 5060 3520 5080 4550 4550 4550 4550 4550 4550 455	DISCHARGE (TONS/DAY)  27800 32200 32200 22000 32500  1 3300 32600 32400 32400 32400 32400 32400 32400 32400 32400 32400 32400 32900 31300 21900 21900 29200 29200 29200	DISCHAMEF (CFS) 2320 2570 2480 2480 2390 2370 2370 2370 2370 2370 2370 2370 2770 1770 1770 1770 1770 1770 1770 17	MFAN CONCENTRATION (MG/L)  4850 5730 5600 3310 4390 4450 5660 3570 4790 2660 1270 1270 1270 1270 1270 1390 1390 1390	015CHAPGE (TONS/DAY) 30400 39000 37500 22200 28400 30400 30400 22000 22500 13000 14900 13400 13400 13400 13400 13400 13400 13400 13400 1980 8940 21400 1980 5050 6270
1 2 3 4 5 5 6 6 7 7 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26	DISCHARGE (CFS)  1490 1740 1740 1640 1640 1650 1670 1670 1670 1670 1670 1670 1670 167	MF AN CONCENT AT 10 M (MG/L)  2430 2430 2550 2750 2750 439 2551 492 7561 492 7561 1020 983 969 969 969 1130 1140	015CMANGE (TOWS //ASY) 12900 14000 12900 12900 12900 12000 1	D1SCHAPGE (CCF) 2340 2370 2340 2310 2310 2370 2340 2310 2360 2360 2360 2360 2360 2360 2360 236	MEAN CONCENT AT 10 MEAN TO A 10	DISCHARGE (TONS/DAY)  27400 32200 32200 22000 22000 32500  1 4300 32400 32400 32400 32400 32400 32400 32400 32400 32400 32400 32900 32900 32900 32900 32900 32900 32900 32900 32900 32900 32900 32900 32900 32900 32900 32900	DISCHAMEF (CFS) 2320 2570 2480 2480 2390 2370 2340 2320 2340 2370 2170 1770 1770 1770 1770 1770 1770 17	MEAN CONCENTRATION (MG/L)  4850 5730 5500 3310 4390 4440 4450 5560 3570 4790 2460 3080 1830 1830 1870 1870 1870 1870 1870 1870 1870 187	015CHAPGE (TONS/DAY) 30400 39000 37500 22200 22400 2000 22500 22500 13000 1340
1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 24 27 24	DISCHARGE (CFS) 1490 1740 1740 1640 1620 1470 1465 1460 1090 411 473 455 490 491 491 1020 4998 490 490 490 490 1050	MF AN CONCENT AT 10 N (MG/L) 2430 2430 2530 2550 2550 2550 2550 2550 2550 25	015CMANGE (TOWS/DAY) 12900 14000 12400 12400 11200 11200 11400 11500 1400 1400 1400 1500 2500 2400 2420 2410 2590 2410 2590 2590 2590 2590 2590 2790 2790 2790 2790 2790 2790 2790 27	D1SCHAPGE (CF) 2340 2370 2340 2310 2370 2340 2310 2340 2340 2340 2340 2360 2360 2360 2360 2360 2360 2370 2420 2420 2430 2300 2320 2770 2760 2760 2760 2760 2760 2760 27	MEAN CONCET AND CONCET	73400 3200 3200 3200 2200 32500 1 3300 32500 1 3300 32400 32400 32400 32400 32400 32400 32400 32400 32400 32500 30	DISCHAMEF (CFS) 2320 2570 2480 2480 2390 2370 2320 2340 2330 2340 2370 1790 1790 1790 1790 1790 1790 1790 17	MEAN CONCENTRATION (MG/L)  4850 5530 3310 4390 4440 4850 5650 4790 4790 4790 4790 4790 4790 4790 1270 1270 1270 1270 1270 1270 1270 127	015CHAPGE (TONS/DAY) 30400 39000 37500 22200 28400 30400 30400 32000 22500 13000 14900 13400 13400 13400 13400 13400 13400 13400 13400 13400 13400 13400 14900 5860 8940 21400 14800 5860 8940 21400 14800 5860 8940 21400 17800 5870 7620 8160 7220 6150
1 2 3 4 5 5 6 7 7 9 9 10 11 12 13 14 15 16 17 18 19 19 20 21 22 23 24 25 26 27 24 29	DISCHARGE (CFS) 1590 1740 1740 1640 1640 1650 1670 1670 1670 1670 1991 973 945 941 981 1070 998	MF AN CONCENT AT 10N (MG/L) 2430 2430 2550 2450 4550 4550 4550 4550 4550 455	015CMANGE (TOWS/DAY) 12900 14000 12400 12400 11200 11200 11200 11400 11500 2000 2400 2400 2400 2400 2400 2400 2	D1SCHAPGE (CFS) 2340 2370 2340 2310 2310 2340 2310 2340 2340 2340 2340 2360 2360 2360 2360 2360 2360 2370 2420 2420 2420 2420 2420 2420 2420 24	MEAN CONCET AND CONCET	73400 3200 3200 3200 2200 3200 2200 32500 1 4300 3200 32400 32400 32400 32400 32400 32400 32400 32400 32400 32500	DISCHAMEF (CFS) 2320 2570 2480 2480 2390 2370 2320 2340 2330 2340 2370 2340 2370 2770 1790 1770 1770 1770 1770 1770 1770 1	MEAN CONCENTRATION (MG/L)  4850 5530 5500 3310 4390 4550 4790 2660 3070 270 1270 1270 1270 1270 1100 1190 1190 1190 1190 1190 1190 11	015CHAPGE (TONS/DAY) 30400 39000 37500 22200 28400 30400 32000 22500 13000 14900 13400 13400 13400 13400 13400 13400 13400 13400 13400 13400 13400 14900 5860 8940 21400 14800 5950 6270 7620 8250 8160 7220 6150 5700 9550
1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 24 27 24	DISCHARGE (CFS)  1690 1740 1740 1640 1640 1650 1670 1670 1670 1670 1670 1670 1670 167	MF AN CONCENT AT 10 A	015CMANGE (TOWS/OAY) 12900 14000 12900 12900 12900 120	D1SCHAPGE (CF) 2340 2370 2340 2310 2370 2340 2310 2340 2340 2340 2340 2360 2360 2360 2360 2360 2360 2370 2420 2420 2430 2300 2320 2770 2760 2760 2760 2760 2760 2760 27	MEAN CONCET AND CONCET	DISCHARGE (TONS/DAY)  27800 32200 32200 22000 32500  1 /3000 32500  1 /3000 32400 32400 32400 32400 32400 32400 32600 31300 27900 27900 21100 27900 17000 27900 17000 27900 17000 27900 17000 27900 17000 27900 17000 27900	DISCHAMEF (CFS) 2320 2520 2520 2620 2620 2620 2620 2620 26	MEAN CONCENTRATION (MG/L)  4850 5730 5500 3310 4390 4450 5660 3570 4790 2460 3080 1830 1830 1270 1870 4670 4370 1100 1130 1130 11620 11370	015CHAPGE (TONS/DAY) 30400 30000 37500 22200 22400 22400 22400 22400 22500 13000 13400 13400 13400 13400 13400 13400 13400 13400 13400 13400 13400 17800 2750 6770 7620 6250 6150 5700
1 2 3 4 5 5 6 7 7 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 24 29 30	DISCHARGE (CFS)  1690 1740 1740 1640 1640 1650 1670 1670 1670 1670 1670 1670 1670 167	MF AN CONCENT AT 10 M (MG/L)  2430 2430 25540  2790 2650 7540  439 2751 492 761 492 761 1020 983 1130 1130 1140 1020 983 1140 1020 983 1140 1020 983 1130 1130 1130 1130 1130 1130 1130 11	015CMANGE (TOWS/DAY) 12900 14000 12900 12900 12900 11200 12600 12600 12600 12600 12600 2520 2300 2410 2650 2510 2520 2410 2650 2520 2510 2520 2510 2520 2510 2520 2510 2520 2510 2520 252	D1SCHAPGE (CFS) 2340 2370 2340 2310 2310 2340 2310 2340 2340 2340 2340 2360 2360 2360 2360 2360 2360 2370 2420 2420 2420 2420 2420 2420 2420 24	MEAN CONCET AND CONCET	DISCHARGE (TONS/DAY)  27800 32200 32200 22000 32500  1 /3000 32500  1 /3000 32500  32400 32400 32400 32400 32400 32400 32400 32600 37500  27000 31300 21900 21900 21000 21100 22500 27900 31000 21100 22500 27900 37000 27900 37000 27900 37000 27900 37000 27900 37000 27900 37000 27900 37000 27900 37000 27900 37000 27900 37000 27900 37000 27900 37000 27900 37000 27900	DISCHAMEF (CFS) 2320 2520 2520 2520 2630 2480 2390 2390 2340 2390 2340 2320 2340 2320 1970 1760 1770 1770 1770 1770 1770 1689 1700 1689 1700 1670 1670 1670 1670 1670 1670 1670	MEAN CONCENTRATION (MG/L)  4850 5730 5500 3310 4390 4450 5660 3570 4790 2460 3080 1830 1839 2890 270 1870 1870 1100 11390 11300 1620 13400 1620 13400	015CHAPGE (TONS/DAY) 30400 30400 30500 37500 22200 28400 30400 32000 229500 13000 13400 13400 13400 13400 13400 13400 13400 13400 13400 17800 27100 27100 2750 8760 8770 1620 8770 1620 8750 8760 8770 1620 8750 8760 8770 1620 8750 8760 8750 8760

# 09379500 SAN JUAN RIVER NEAR BLUFF, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE. WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		APPIL			MAY			JUNE					
	MEAN	ME AN CONCEN-	SEDIMENT	MEAN	MEAN CONCEN-	SEDIMENT	MEAN	ME AN CONCEN-	SED1MENT				
DAY	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)				
1	1320	2120	<b>7</b> 560	836	1240	2800	2620	2540	18000				
3	1200	997 1770	3230 5110	750 669	781 722	1990	2730 2400	2590 2000	19100				
4	827	1380	3080	639	932	1610	2370	2190	14000				
5	842	1130	2570	544	526	773	2530	3960	27100				
6 7	911 782	2480 1810	5430 3820	532 522	578 1250	830 1760	2670 2150	3240 2490	23400 14500				
8	796	1630	3500	1030	1900	5280	2250	2500	15200				
9 10	811 834	1590 2060	3490 4640	1500 1520	3240 3380	14000 13900	2370 2490	4880 2630	31200 17700				
11	934	1550	3490	1260	2180	7420	2490	2520	16900				
12	789	1990	4240	1090	1400	4120	2720	3490	25000				
13 14	774 919	1370 1460	2860 3230	1120 1910	1450 3140	4380 16700	2650 2320	3050 2440	21800 15300				
15	804	871	1890	2220	3760	22500	2170	1820	10700				
16	804	1410	3060	2450	4380	29000	2120	1400	8010				
17 18	863 883	1520 1670	354n 3980	2760 3520	4580 5000	34100 47500	2060 2080	1340 1400	7450 7860				
19	905	1820	4450	4290	6300	73000	2090	1550	8750				
20	894	1520	3670	4440	6220	74600	2240	1560	7620				
21 22	947 765	2130 1280	487A 264A	4180 3710	6140 4910	69300 49200	2520 2580	2440 1900	16600 13200				
23	700	1130	2140	3670	5130	50900	2490	1930	13000				
24 25	683 692	1280	2360 2090	3670 3500	5340 3710	52900 35100	2270 2060	1640 1370	10100 7620				
	653	952			-								
26 27	642	820	1680 1420	3400 3300	3510 5110	32200 45500	2070 2190	1410 1380	7890 8120				
24	568 606	771 1130	1180 1850	3180	5000	42900	2140	1350 1380	7800 7190				
30	880	1670	3970	3020 2860	2400 2460	19500 19000	1930 2030	1500	8220				
31				2490	2520	16900							
TOTAL	24698		101030	70582		790963	69790		422320				
		JIILY			AUGUST			SEPTEMBER					
		MEAN		_	MEAN			MEAN					
DAY	MFAN DISCHARGF (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHAPGE (TONS/DAY)	MFAN DISCHARGE (CFS)		SEDIMENT DISCHAPGE (TONS/DAY)				
	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHAPGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHAPGE (TONS/DAY)				
1	DISCHARGE (CFS) 1830 1600	MEAN CONCEN- TRATION (MG/L) 1800 1060	DISCHARGE (TONS/DAY) HR90 4540	DISCHARGE (CFS) 580 580	MEAN CONCEN- TRATION (MG/L) 450 398	DISCHAPGE (TONS/DAY) 705 623	DISCHARGE (CFS) 796 674	MEAN CONCEN- TRATION (MG/L) 1980 1930	DISCHAPGE (TONS/DAY) 4260 3510				
1	DISCHARGE (CFS) 1830 1600 1430	MEAN CONCEN- TRATION (MG/L) 1800 1060 1160	DISCHARGE (TONS/DAY) BR90 4580 4480	DISCHARGE (CFS) 580 580 520	MEAN CONCEN- TRATION (MG/L) 450 398 245	DISCHAPGE (TONS/DAY) 705 623 344	DISCHARGE (CFS) 796 674 669	MEAN CONCEN- TRATION (MG/L) 1980 1930 4410	DISCHAPGE (TONS/DAY) 4260 3510 7970				
1 2 3	DISCHARGE (CFS) 1830 1600	MEAN CONCEN- TRATION (MG/L) 1800 1060	DISCHARGE (TONS/DAY) HR90 4540	DISCHARGE (CFS) 580 580	MEAN CONCEN- TRATION (MG/L) 450 398	DISCHAPGE (TONS/DAY) 705 623	DISCHARGE (CFS) 796 674	MEAN CONCEN- TRATION (MG/L) 1980 1930	DISCHAPGE (TONS/DAY) 4260 3510				
1 2 3 4 5	DISCHARGE (CFS) 1830 1600 1430 1280 1160	MEAN CONCEN- TRATION (MG/L) 1800 1060 1160 1160 1150	DISCHARGE (TONS/DAY) RA9U 45H0 44H0 4010 3600	DISCHARGE (CFS) 580 580 520 520 520	MEAN CONCEN- TRATION (MG/L) 450 394 245 9960 18300	DISCHAPGE (TONS/PAY)  705 623 344 12600 25700	DISCHARGE (CFS) 796 674 669 634 6240	MEAN CONCEN- TRATION (MG/L) 1980 1930 4410 4100 24600	DISCHAPGE (TONS/DAY) 4260 3510 7970 7020 414000				
1 ? 3 4 5	DISCHARGE (CFS) 1830 1600 1430 1280 1160	MEAN CONCEN- TRATION (MG/L) 1400 1160 1160 1160 1150	DISCHARGE (TONS/DAY)  R890 4540 4440 4010 3600 5560	DISCHARGE (CFS) 580 580 520 520 520	MEAN CONCEN- TRATION (MG/L) 450 39d 245 4960 18300	DISCHAPGE (TONS/DAY) 705 623 344 12600 25700	DISCHARGE (CFS) 796 674 669 634 6240	MEAN CONCEN- TRATION (MG/L) 1980 1930 4410 4100 24600	DISCHAPGE (TONS/DAY) 4260 3510 7970 7020 414000				
1 2 3 4 5 6 7 8	DISCHARGE (CFS)  1930 1600 1430 1280 1160  1240 1350 1350 1970	MEAN CONCEN- TRATION (MG/L) 1400 1160 1150 1150 14300 2180	DISCHARGE (TONS/DAY)  RR9U  4540  4440  4010  3600  5560  15700  7950  60000	DISCHARGE (CFS) 580 580 520 520 520 600 700 3000 1500	MEAN CONCEN- TRATION (MG/L) 450 398 245 9960 18300 24700 20500 16700 12400	DISCHAPGE (TONS/DAY)  705 623 344 12600 25700  40000 38700 135000 151800	OISCHARGE (CFS) 796 674 689 634 6240 34700 15500 10 300 4960	MEAN CONCEN- TRATION (MG/L) 1930 4410 4100 24600 34300 37500 39600 12600	DISCHAPGE (TONS/DAY)  4260 3510 7970 7020 414000  3210000 1570000 1100000 169000				
1 2 3 4 5 6 7 3 9	DISCHARGE (CFS) 1430 1600 1430 1280 1160 1240 1350 1350 1370 2580	MEAN CONCENTRATION (MG/L)  1400 1160 1160 1150 1260 4300 2180 10500 10900	DISCHARGE (TUNS/DAY)  RR90 4540 4440 4010 3600 5540 15700 7950 60000 79800	DISCHARGE (CFS) 580 580 580 520 520 520 600 700 3000 1500	MEAN CONCEN- TRATION (MG/L) 450 398 245 9960 18300 24700 20500 16700 12400 10600	DISCHAPGE (TONS/DAY) 705 623 344 12600 25700 40000 38700 134000 51800 24600	015CHARGE (CFS) 796 674 674 634 6240 34700 15500 10 300 4940 3780	MEAN CONCEN- TRATION (MG/L) 1930 4410 24600 34300 37500 39600 12600 4060	DISCHAPGE (TONS/DAY)  4260 3510 7970 7020 414000  3210000 1570000 1100000 159000 41400				
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS)  1830 1600 1430 1280 1160 1240 1350 1350 1370 2580 2080	MEAN CONCEN- TRATION (MG/L)  1400 1060 1160 1150 1150 1560 2180 2180 10500 10500 H150	DISCHARGE (TUNS/DAY)  RR9U 4540 4440 4410 3600 5560 15700 7950 60000 79800	DISCHARGE (CFS) 580 580 520 520 520 600 700 3000 1500 1000	MEAN CONCEN- TRATION (MG/L) 450 394 245 9660 18300 24700 20500 16700 12400 10600	DISCHAPGE (TONS/DAY)  705 623 344 12600 25700 40000 38700 135000 518000 518000	OISCHARGE (CFS) 796 674 669 634 6240 34700 15500 10300 4960 3770	MEAN CONCENTRATION (MG/L) 1980 1930 4410 4410 24600 34500 37500 39600 12600	DISCHAPGE (TONS/DAY)  4260 3510 7970 7020 414000  3210000 1570000 1100000 141400				
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS)  1830 1600 1430 1280 1160  1240 1350 1370 1270 2580  2080 1780 1780	MEAN CONCEN- TRATION (MG/L) 1400 1060 1160 1150 1430 2180 10500 10900 8150 5300 2600	DISCHARGE (TUNS/DAY)  #A90 #540 #440 #4010 #600 #5560 #5760 #6000 #6980 #5800 #5800 #5800 #5800 #5800	DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L) 450 394 245 9960 18300 20500 16700 12400 10600 48300 30500 10900	DISCHAPGE (TONS/DAY)  705 623 344 12600 25700 40000 34700 134000 514000 514000 50500	01SCHARGE (CFS) 796 674 669 634 6240 34700 15500 10300 4960 3770 3250 3250	MEAN CONCEN- TRATION (MG/L) 1980 1930 4410 4100 24600 37500 39600 12600 12700 17000 49300	DISCHAPGE (TONS/DAY) 4260 3510 7070 414000 3210000 1570000 1100000 144000 107000 1173000 1130000				
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS)  14 30 1600 1430 1280 1160  1240 1350 1970 2580 2080 1780	MEAN CONCENTRATION (MG/L) 1400 1060 1160 1150 1150 1280 1280 10900 4150 5300	DISCHARGE (TUNS/DAY)  RR90 4540 4410 3600 15700 7950 60000 79800 45800 25500	DISCHARGE (CFS) 580 580 580 520 520 520 600 700 3000 1500 1000	MEAN CONCENTRATION (MG/L)  450 398 245 9966 18300 20500 16760 12800 10600 48300 30500	DISCHAPGE (TONS/DAY) 705 623 344 12600 25700 40000 38700 134000 134000 24600	DISCHARGE (CFS) 796 674 659 634 620 34700 15500 10300 4940 3770	MEAN CONCENTRATION (MG/L) 1980 1930 4410 4100 24600 37500 39600 12500 4060	DISCHAPGE (TONS/DAY)  4260 3510 7970 7020 414000 3210000 1570000 1100000 41400 107000 173000				
1 2 3 4 5 6 7 7 8 9 10	DISCHARGE (CFS) 1830 1600 1430 1280 1160 1280 1160 1280 1297 2580 2080 1780 1560 1340	MEAN CONCENTRATION (MG/L) 1400 1060 1160 1150 1150 1250 1260 1250 1250 1250 1250 1250 1250 1250 125	DISCHARGE (TUNS/DAY)  RR90 4540 4440 4010 3660 5560 15760 7950 60000 79800 45800 25500 11000 4500	DISCHARGE (CCFS) 580 580 580 520 520 520 600 700 1500 1000 774 724 697 645	MEAN CONCENTRATION (MG/L)  450 398 245 9966 18300 24700 20500 12400 10600 48300 30500 10900 6380	DISCHAPSE (TONS/NAY)  705 623 344 12600 25700 40000 35700 135000 13600 25600 20500 11100	01SCHARGE (CFS) 796 674 659 634 6240 347n0 155n0 494n 3770 325n 325n 325n 325n 325n 325n 325n 325n	MEAN CONCENTRATION (MG/L)  1980 1930 4410 4100 24600  34300 37500 4060 12600 127000 49800 49800 49800 26900	DISCHAPGE (TONS/DAY) 4260 3510 7970 7020 414000 3210000 1570000 169000 41400 173000 173000 1990000 408000				
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS) 1830 1600 1430 1240 1150 1240 1350 1370 2580 2080 1780 1560 1150 1060 971	MEAN_CONCEN_TASTION (MG/L)  1400 1160 1160 1160 1160 1160 1160 1160	DISCHARGE (TONS/DAY)  #R90 4540 4010 3600 5540 15700 15700 6000 7950 6000 45800 25500 11000 45800 6150 3290	DISCHARGE (CCF3) 580 580 580 520 520 600 700 3000 1500 1500 774 697 645 583 552	MEAN CONCENT 450 MG/L) 450 394 245 996 18300 24700 20500 10600 10600 6380 3930 10900 10400 6380 3930 1940 6380 6380 6380 1940 6380 6380 6380 6380 6380 6380 6380 638	DISCHAPSE (TONS/NAY)  705 623 344 12600 25700  40000 34700 134700 51800 52400 101000 55900 111000 6190 2210	01SCHARGE (CCF) 796 674 674 634 6240 34700 15500 10300 4960 3770 10200 5270 7460 6230 4500	MEAN CONCENTRATION (MG/L) 1980 1930 4410 4100 24500 34300 24500 12500 12700 17000 35000	DISCHAPGE (TONS/NAY) 4260 3510 7970 7020 414000 3210000 11570000 1150000 41400 107000 1170000 1190000 408000 705000 247000				
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16	DISCHARGE (CFS) 1830 1600 1430 1240 1350 1350 1970 2580 2080 1780 1780 1360 1360	MEAN_CONCENT_PATION (MG/L)  1400 1160 1160 1160 1160 1160 1160 116	DISCHARGE (TONS/DAY)  #R90 #540 #440 #4010 #600 #5560 #5760 #60000 #5800	DISCHARGE (CCFS) 580 580 580 580 520 520 600 700 3000 1500 1000 774 724 697 645 583	MEAN CONCENT AT 10 MG/L)  450 3994 245 9996 18300 16770 12800 1128	DISCHAPSE (TONS/NAY)  705 621 344 12600 22700 40000 34700 134000 51800 51800 52400 101000 59600 20500 11100	01SCHARGE (CFS) 796 674 649 634 6240 34700 15500 10 300 4940 3770 10 200 5620 7460	MEAN CONCENTRATION (MG/L) 1980 4410 4100 24500 34500 12500 12500 12700 12700 12700 12700 12700 14700 1	OISCHAPGE (TONS/DAY) 4260 3510 7970 7020 414000 1570000 1100000 14400 107000 173000 408000 705000 247000 84300 73100				
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS)  1830 1600 1430 1280 1180 1180 1180 1180 1280 1180 1280 12	MEAN_CONCEN_TASTION (MG/L)  1400 1160 1160 1160 1160 1160 1160 1160	DISCHARGE (TONS/DAY)  #R90 4540 4010 3600 5540 15700 15700 6000 7950 6000 45800 25500 11000 45800 6150 3290	DISCHARGE (CFS) 580 580 580 580 520 520 600 700 3000 1500 1704 724 697 645 583 552 532 866	MEAN CONCENT 450 MG/L) 450 394 245 996 18300 24700 20500 10600 10600 6380 3930 10900 10400 6380 3930 1940 6380 6380 6380 1940 6380 6380 6380 6380 6380 6380 6380 638	DISCHAPSE (TONS/NAY)  705 621 344 12600 25700 40000 134700 134800 51800 51800 524500 11100 52500 11100 2710 2410 67400	01SCHARGE (CFS) 796 674 649 634 6240 34700 15500 10300 4940 3770 10200 5620 7460 6230 4500 3740	MEAN CONCENTRATION (MG/L) 1980 1930 4410 4100 24500 34300 24500 12500 12700 17000 35000	DISCHAPGE (TONS/NAY) 4260 3510 7970 7020 414000 3210000 11570000 1150000 41400 107000 1170000 1190000 408000 705000 247000				
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DISCHARGE (CFS) 1830 1600 1430 1240 1350 1350 1970 2580 2080 1780 1780 1560 1340 1150 1060 971 944 447 813	MEAN_CONCENT_PATION (MG/L) 1400 1160 1160 1160 1160 1160 1160 1160	DISCHARGE (TONS/DAY)  #R90 #540 #440 #4010 #4010 #600 #5560 #5760 #60000 #5800 #5800 #5560 #10000 #5800 #5800 #590 #800 #590 #800 #590 #800 #800 #800 #800 #800 #800 #800 #8	DISCHARGE (CFS) 580 580 580 580 520 520 600 700 3000 1500 1704 724 697 645 583 552 532 866 1430 2070 3150	MEAN CONCENT AT 10 MG/L)  450 3994 245 9966 18300 16770 12400 117400 117400 117400 117400 117400 6380 26700 117400 6380 26700 117400 62800 42000	DISCHAPSE (TONS/NAY)  705 621 344 12600 22700 40000 134000 134000 51800 24500 111000 59600 20500 11100 2210 2410 42200 3900000 357000	01SCHARGE (CFS) 796 674 649 634 6240 34700 15500 10300 4940 3770 10200 5620 7460 3740 3300 3010 2630	MEAN CONCENTRATION (MG/L) 1980 1930 4410 4100 24600 34300 12600 127500 127500 12700	OISCHAPGE (TONS/NAY) 4260 3510 7970 7020 414000 3210000 1570000 1100000 169000 41400 173000 1390000 408000 775000 247000 84300 73100 54800 41400 23300				
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3	DISCHARGE (CFS)  1830 1600 1430 1280 1180 1180 1180 1280 1350 1970 2580 2080 1780 1780 1560 1340 1150 1060 971 944 447 841 841	MEAN_CONCENT_PATION (MG/L) 1400 1160 1160 1150 1560 10500 10500 15500 15500 15500 15500 15500 15500 15500 15500 15500 15500 1550 15500 155	DISCHARGE (TONS/DAY)  #R99 #549 #440 #4010 #4010 #5560 #5760 #5760 #60000 #5800 #5800 #5800 #5800 #5800 #5800 #5800 #590 #400 #5800 #590 #590 #590 #590 #590 #590 #590 #5	DISCHARGE (CFS)  580 580 580 580 520 520 600 700 3000 1500 1500 1774 724 697 645 583 552 532 866 1430 2070 3150 2360	MEAN CONCENT 450 A 500 A	DISCHAPSE (TONS/NAY)  705 621 344 12600 25700  40000 147000 137000 51800 52400 101000 59800 111000 6190 2210 2410 62200 390000	01SCHARGE (CCF) 796 674 674 689 634 700 15500 10300 4950 3770 10200 3770 10200 6230 4500 3740 37300 3030	MEAN CONCENTRATION (MG/L) 1980 1930 4410 4100 24600 37500 12600 12700 17000 35000 14710 7240 6150 5060	DISCHAPGE (TONS/NAY) 4260 3510 7970 7020 414000 3210000 1570000 1100000 144000 107000 1173000 1190000 408000 705000 247000 84300 73100 54800 41400				
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS)  1830 1600 1430 1240 1150 1270 1350 1970 2080 1780 1560 1780 160 971 946 947 817 817 813 861 877 813	MEAN_CONCENT_C	DISCHARGE (TONS/DAY)  #R90 4540 4010 3600 5560 15700 60000 79800 45800 25500 11000 45800 25500 3790 290 3880 3400 3790 2480 3490 2720	DISCHARGE (CCFS) (CFS) (CFS) 580 580 580 520 520 600 700 3000 1500 1000 7744 7244 697 645 583 552 866 1430 2070 3150 2350 1500	MEAN CONCENT 450 A 50	DISCHAPSE (TONS/NAY)  705 621 344 12600 25700 40000 34700 13-000 51800 524600 11100 524600 2210 2210 327000 337000 337000 337000 337000 24000 64900 24400	01SCHARGE (CCF) 796 674 669 634 6240 34700 15500 10300 4950 3770 10200 5520 77660 6230 4500 3740 3740 3740 3740 3740 3740 3740 4750 4750 4750 4750 4750 4750 4750 4	MEAN CONCENTRATION (MG/L)  1980 1930 4410 4100 74600 34100 74600 12700 12700 12700 17000 1	OISCHAPGE (TONS/NAY) 4260 3510 7970 7020 414000 3210000 1570000 1100000 144000 107000 1130000 1130000 1130000 123000 247000 88300 73100 54800 41400 23300 20700 31500				
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS)  18 30 16 00 14 30 12 40 13 50 12 70 13 50 12 70 13 50 12 70 13 50 14 70 15 60 16 60 17 60 17 60 17 70 18 17 18 17 18 18 29	MEAN_CONCENT_C	DISCHARGE (TONS/DAY)  #R90 4540 4010 3600 5550 15700 60000 79800 45800 25500 11000 45800 27500 3880 3880 3890 2760 3290 2480 3490 2720 3600	01 SCHARGE (CCFS) 580 580 580 580 520 520 600 700 3000 1500 1000 7744 724 697 645 583 552 552 866 1430 2070 3150 2250	MEAN CONCENT 450 A 50	DISCHAPSE (TONS/NAY)  705 621 344 12600 25700 40000 34700 13-000 51800 524600 11100 52400 2210 2210 377000 377000 324000 64900 33700	01SCHARGE (CCF) 796 674 679 634 6240 34700 15500 10 3000 4950 3770 10 200 5590 7760 6230 4500 3740 3740 2650 2740 2650	MEAN CONCENTRATION (MG/L) 1980 1930 4410 4100 24600 37500 12600 17000 49300 26900 35000 14700 7270 7240 6150 5060 3000 4080 2770	OISCHAPGE (TONS/NAY) 4260 3510 7970 7020 414000 3210000 1570000 1100000 144000 173000 1190000 247000 883100 7755000 247000 883100 73100 54800 41400 23300 20700 31500 159000				
1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 24 5 26 27	DISCHARGE (CFS)  1830 1600 1430 1240 1350 1270 2580  2080 1780 1780 1780 1780 1780 1780 1780 1	MEAN_CONCENT   MEAN_TRATION (MG/L)  1400   1160   1160   1160   1280   1280   1290   1300   1150   1400   1310   1	DISCHARGE (TONS/DAY)  #R90 4540 4010 3600 5560 15700 60000 79800 45800 25500 11000 45800 25500 11000 45800 27500 2760 38400 38400 3760 3290 2480 3490 2720 3600	DISCHARGE (CCFS) 580 580 580 580 520 520 600 700 3000 1500 1000 774 724 7697 645 883 552 552 866 1430 2070 3150 2250 1200	MEAN CONCENT AT 10 MG/L1	DISCHAPSE (TONS/NAY)  705 623 344 12600 25700 40000 34700 13-000 51800 524600 11100 52400 42200 32700 377000 324000 64900 33700 24400 64900 33700 24400	01SCHARGE (CCF) 796 674 674 634 6240 34700 15500 10300 4950 3770 10200 5520 3770 6230 4500 3740 3740 2740 2650 2740 2650 2750	MEAN CONCENT OF THE PROPERTY O	OISCHAPGE (TONS/NAY) 4260 3510 7970 7020 414000 3210000 1570000 1100000 144000 173000 1173000 1173000 1173000 127000 127000 13100 247000 883100 775000 247000 883100 735000 247000 186000 197000 31500 19900 19900				
1 2 3 4 5 6 6 7 7 8 9 10 11 12 13 14 15 16 17 17 19 20 21 22 23 24 5 25 26 27 28	DISCHARGE (CFS)  18 30 1600 14 30 12 40 11 50 12 50 12 50 12 50 12 50 12 50 13 50 13 50 13 50 13 50 14 50 15 60 15 60 17 60 17 945 947 18 17 18 18 18 18 18 18 18 18 18 18 18 18 18 1	MEAN_CONCENT_C	DISCHARGE (TONS/DAY)  #R99 #540 #440 #401 #4010 #5560 #5760 #5760 #5760 #5800	DISCHAPGE (CFS)  580 580 580 580 520 520 600 700 3000 1500 1724 697 645 583 552 532 866 1430 2070 3150 1250 1250 1200	MEAN CONCENT AT 10 M (MG/L) 450 M (MG/L) 450 M (MG/L) 450 M (MG/L) 470 M (MG/L) 48100 M (MG/L) 4	DISCMADSE (TONS/NAY) 705 623 344 12600 25700 40000 37700 13-000 51400 51400 101000 20500 111000 6190 24500 2500 11100 6210 5210 52400 42200 390000 137700 204000	DISCHARGE (CCF) 796 674 679 634 6240 34700 15500 10300 4960 3770 10200 5620 7460 6230 4550 3740 3300 3010 2850 2860 2740 2650	MEAN CONCENTRATION (MG/L) 1980 1930 4410 44100 24600 34300 37500 12500 12500 12600 12700 12700 12700 12700 12700 12700 135000 14710 7240 7240 7240 7250 3050 3050 3050 3050 3050 3050 3050 3	DISCHAPGE (TONS/PAY)  4260 3519 7770 7029 414000 3210000 1570000 1670000 1159000 41400 107000 173000 173000 173000 173000 247000 884300 73100 54800 41400 20700 31500 18500 18500 18500 19900 20200 20200 20200				
1 2 3 4 5 6 7 7 3 9 10 11 12 13 14 15 16 17 14 19 20 22 24 5 26 27 28 29 30	DISCHARGE (CFS)  18 30 1600 14 30 12 40 11 50 12 50 13 50 13 50 13 50 15 60 15 60 15 60 15 60 17 60 18 70 18	MEAN_CONCENT_C	DISCHARGE (TONS/DAY)  #R90 4540 4010 3600 5560 15700 7950 6000 45800 45800 45800 45800 45800 3290 2480 3290 2480 3490 2440 2440 2440 2440 2440 2740 2020	DISCHARGE (CFS)  580 580 580 580 520 520 600 3000 1500 1000 774 697 645 583 552 866 1430 2070 3150 1250 1250 1200	MEAN CONCENT AT 10 M (MG/L) 450 M (MG/L) 450 M (MG/L) 450 M (MG/L) 470 M (MG/L) 48300 M (MG/L) 4	DISCMAPSE (TONS/NAY)  705 623 344 12600 26700 40000 101000 514000 514000 20500 111000 6190 2210 6210 6210 6210 6210 6210 6210 621	01SCHARGE (CCF) 796 674 674 634 6240 34700 15500 10300 4950 3770 10200 5520 3770 6230 4500 3740 3740 2740 2650 2740 2650 2750	MEAN CONCENT OF THE PROPERTY O	OISCHAPGE (TONS/NAY) 4260 3510 7970 7020 414000 3210000 1570000 1100000 144000 173000 1173000 1173000 1173000 127000 127000 13100 247000 883100 775000 247000 883100 735000 247000 186000 197000 31500 19900 19900				
1 2 3 4 5 6 7 7 8 9 10 11 12 3 14 5 16 7 18 12 7 18 2 7 2 8 2 7 2 8 2 9	DISCHARGE (CFS)  1930 1600 1430 1240 1350 1270 2580  2080 1780 1780 1780 1780 1780 1780 1780 1	MEAN_CONCENT   MEAN_C	DISCHARGE (TONS/DAY)  #R90 4540 4010 3600 5550 15700 60000 79800 45800 25500 11000 45800 25500 25600 25700 25700 25800 25800 2790 3880 3990 2480 3290 2480 3790 2480 3790 4140 3720 4140 27240 1490 2020	DISCHARGE (CFS) 580 580 580 580 520 520 600 700 3000 1500 1000 774 724 697 645 883 552 866 1430 2070 3150 1250 1250 1250 1100 1100 1100 1100 1	MEAN CONCENT AT 10 MG/L)  450 3904 245 9456 9456 18300 16700 16700 16700 16700 16700 16700 6380 16900	015CMAPSE (TONS/NAY) 705 623 344 12600 25700 40000 137000 138000 51800 27600 101000 52600 27600 11100 2710 2710 2710 377000 284000	01SCHARGE (CCF) 796 674 674 634 6240 34700 15500 10300 4950 3770 10200 5520 4500 3700 3700 3700 3700 2810 2850 2860 2740 2650 2650 2650 2650 2650 2740 2790	MEAN CONCENT OF THE PROPERTY O	OISCHAPGE (TONS/NAY)  4260 3510 7970 7020 414000  3210000 1570000 1100000 149000 41400 107000 1130000 1390000 42000 42000 42000 42000 42000 42000 14000				
1 2 3 4 5 6 7 7 3 9 10 11 12 13 14 15 16 17 14 19 20 22 24 5 26 27 28 29 30	DISCHARGE (CFS)  18 30 1600 14 30 12 40 11 50 12 50 13 50 13 50 13 50 15 60 15 60 15 60 15 60 17 60 18 70 18	MEAN_CONCENT_C	DISCHARGE (TONS/DAY)  #R90 4540 4010 3600 5560 15700 7950 6000 45800 45800 45800 45800 45800 3290 2480 3290 2480 3490 2440 2440 2440 2440 2440 2740 2020	DISCHARGE (CFS)  580 580 580 580 520 520 600 3000 1500 1000 774 697 645 583 552 866 1430 2070 3150 1250 1250 1200	MEAN CONCENT AT 10 M (MG/L) 450 M (MG/L) 450 M (MG/L) 450 M (MG/L) 470 M (MG/L) 48300 M (MG/L) 4	DISCMAPSE (TONS/NAY)  705 623 344 12600 26700 40000 101000 514000 514000 20500 111000 6190 2210 6210 6210 6210 6210 6210 6210 621	01SCHARGE (CCF) 796 674 674 634 6240 34700 15500 10300 4950 3770 10200 5520 4500 3700 3700 3700 3700 2810 2850 2860 2740 2650 2650 2650 2650 2650 2740 2790	MEAN CONCENT OF THE PROPERTY O	OISCHAPGE (TONS/NAY)  4260 3510 7970 7020 414000  3210000 1570000 1100000 149000 41400 107000 1130000 1390000 42000 42000 42000 42000 42000 42000 14000				

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

711677 23610303

# 09379500 SAN JUAN RIVER NEAR BLUFF, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE: C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE: V, VISUAL-ACCOUNLAITION TUBE: W, IN DISTILLED WATER)

		WATER TEM~			SUSPENDED					PART	ICLE	SIZE					METHOD
		PERA- TURE	DISCHARGE	CONCEN- TRATION	SEDIMENT DISCHARGE	PERCE	NT FI	NER 1	THAN 1	THE SI	ZE (I	N MIL	LIME	TERS)	INDI	CATED	OF ANALY-
DATE	TIME	(°C)	(CFS)	(MG/L)	(TONS/DAY)	.002	•004	.008	.016	.031	.062	• 1,25	• 250	•500	1.00	2.00	212
OCT 1 1969 1		17.0	1590	1390	5970	22	22		34		72	93	100				VPWC
NOV 17 1	1320	7.0	2240	1800	10900	13	15	~~	22		60	95	100				VPWC
DEC 8 1	L340	4.0	1890	445	2270	17	22				64	96	100				VPWC
JAN 19 1970 1	L430	3.5	973	212	557	30	37				90	100					VPWC
FEB 10 1	L350	11.0	2340	446	2820	16	20		28		63	97	100				VPWC
MAR 4 1		8.0	2480	3370	22600	6	6		8		18	52	90	99	100		VPWC
APR 16 1	L550	8.0	829	1390	3110	7	9				22	57	95	100			VPWC
MAY 18 1	L610	16.0	3850	4220	43900	17	18				72	94	99	100			VPWC
JUN 10 1	L125	14.0	2450	3280	21700	7	9				26	57	91	99	100		VPWC
JUL 16 1	L350	23.0	1080	412	1200	36	52				96	99	100				VPWC
AUG 11 1	1600		889	48000	119000	57	78				93	97	100				VPWC
AUG 21 1	1600		4350	42000	512000	34	37				82	94	97	100			VPWC
AUG 23 1	1000		1550	51000	221000	42	54				77	99	100				VPWC
SEP 1 1	1415		726	1680	3290	34	38				98	100					VPWC
SEP 6 1	1200		53000	37700	5590000	55	67				93	97	100				VPWC
SEP 7 1	1800		14800	57700	2390000	43	55				74	86	95	99	100		VPWC

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1969 70 SEPTEMBER 1970 (METHOD OF ANALYSIS: H, HYDROMETER: O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

	WATER TEM~	NUMBER	PARTICLE SIZE												METHOD	
	PERA-	SAM-			PERCENT	T FINE	R THAN	THE S	IZE (1	N MILL	IMETER	S) IND	ICATED		OF	
	TURE	PLING	DISCHARGE												ANALY-	
DATE TIME	(°C)	POINTS	(CFS)	• 06 2	.125	.250	• 500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	515	
OCT 1 1969		17	1590	1	7	58	95	100							v	
NOV 17		17	2240	7	33	95	100								ν	
DEC 8		17	1890		4	42	89	98	99	99	99	99	100		Sγ	
JAN 19 1970		16	973		4	48	89	99	100						SV	
FEB 10		17	234		4	58	97	100							V	
MAR 4		17	2480		3	40	88	100							v	
APR 16		17	829		ī	33	92	100							v	
MAY 18		17	3850	1	4	38	95	100							v	
JUN 10		17	2450		8	43	92	100							v	
JUL 16		17	1080		1	48	97	100							ν	
SEP 1		1.5	726	7	45	65	78	80	1.00						SV	

#### COLORADO RIVER MAIN STEM

# 09380000 COLORADO RIVER AT LEES FERRY, ARIZ. (Irrigation network station)

COCATION.--Lat 36°51'53", long 111°35'15", in NEASE & sec.13, T.40 N., R.7 E., Coconino County, in Navajo Indian Roservation, at gaging station at head of Marble Gorge at Lees Ferry, 0.8 mile upstream from Paria River, 16 miles downstream from Clen Canyon Dam, 28 miles downstream from Utah-Arizona State line, and 61.5 miles upstream from Utitle Colorado River.

DRAINAGE AREA.--107,900 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: January to July 1926, October 1926 to June 1927, October 1928 to September 1930, November 1942 to October 1945, October 1947 to September 1970.

Water temperatures: July 1949 to September 1970.

Sediment records: October 1928 to December 1933, November 1942 to September 1944, October 1947 to September 1950, Gediment records: October 1928 to December 1930 (partial records).

EXTERMES.--1969-70:

DISSOlved solids: Maximum, 705 mg/l Mar. 1-31; minimum, 562 mg/l Dec. 1-31.

Hardness: Maximum, 334 mg/l Apr. 1-30; minimum, 270 mg/l Oct. 1-31.

DATE	MEAN DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT. 01-31	10200	10	77	19	~-	75		156	o	222	44
NOV. 01-30	11900	11	70	24		82		168	0	229	46
DEC. 01-31	13200	11	70			83		174	0	224	48
JAN.				24							54
01-31 FEB.	11500	11	77	26		89		173	0	253	
01-28 MAR.	8010	11	79	28		98		176	3	269	60
01-31 APR•	7910	11	84	30		103		185	0	294	66
02-30A MAY	15800	9.0	86	29	94		3.7	166	4	299	72
01-31 JUNE	14600	9.1	85	29		95		176	0	286	66
01-30 JULY	13400	8.7	81	26		83		159	3	260	57
01-31	12500	8.4	73	29		83		158	2	255	56
AUG. 01-31	12600	8.2	73	26		81		152	3	247	54
SEP. 01-30	11800	8.1	73	24		78		150	4	237	52
WTD. AVG.		9.6	77	26		86		165	2	257	57
TIME WTD. AVG.	12000	9.7	77	26		86		166	2	256	56
TOT. LOAD (TONS)		113000	913000	309000		900000		1952000	19300	27000	667000
						ITIONAL SA					
OCT. 21	17600		67	25	67		3.7	154	0	215	49
NOV. 20	18600		68	25	70		3.4	156	0	224	45
DEC. 15	18700		70	26	73		3.6	160	0	230	48
JAN. 20	14400		77	28	83		3.9	170	0	260	56
FEB. 15	3210				87			174	9	254	65
MAR.			81	30			4.0				
18 APR.	12700	~~	86	33	98		4.5	182	0	296	74
20 May	14000		90	30	98		4.2	182	0	298	75
19 JUNE	19700		80	31	90		3 • 8	171	0	282	68
16 JULY	6490		78	28	82		3.8	163	0	262	56
17 AUG.	14400		74	29	80		3.9	161	0	258	56
18 SEP.	20200		72	28	78		3.4	158	0	252	55
29	18400		72	25	75		3.4	156	0	240	52

A INCLUDES 0.4 MG/L OF DISSOLVED FLUORIDE (F).

### COLORADO RIVER MAIN STEM

## 09380000 COLORADO RIVER AT LEES FERRY, ARIZ. -- Continued

EXTREMES. --1968-70:--Continued

Specific conductance: Maximum daily, 1,080 micromhos Mar, 15, 16, Apr, 22; minimum daily, 783 micromhos Oct. 6.

Water temperatures: Maximum, 18.0°C Nov. 1; minimum, 2.0°C Jan. 29, 30.

Period of record (1965-70):
Dissolved solids: Maximum, 757 mg/l Apr. 1-30, 1967; minimum, 296 mg/l Sept. 1-30, 1965.

Hardness: Maximum, 386 mg/l Apr. 26-30, 1969; minimum, 166 mg/l Aug 1-31, Sept. 1-30, 1965.

Specific conductance: Maximum daily, 1,260 micrombos Apr. 20, 21, 1967; minimum daily, 460 micrombos Aug. 10, 1965.

Water temperatures: Maximum, 21.0°C on several days during August, September, and October 1965, 1967, 1968; minimum, 2,0°C Jan. 29, 30, 1970.

REMARKS. --Because of the regulation of flow by Glen Canyon Dam since Mar. 13, 1963, and the subsequent filling of Lake Powell, extreme values for the period of record include only those obtained after July 31, 1965.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

CHENTIAL MALISES, WATER TEXT SCIENCE 1909 TO SEPTEMBER 1919											
	DIS_ SOLVED	DIS- SOLVED	DIS- SOLVED SOLIDS (RESI-	DIS- SOLVED SOLIDS (SUM OF	DIS- SOLVED SOLIDS	DIS- SOLVED SOLIDS	HARD-	NON- Car- Bonate	SODIUM AD- SORP-	SPECI- FIC COND-	
	NITRATE	BORON	DUE AT	CONSTI-	(TONS	(TONS	NESS	HARD-	TION	UCTANCE	PH
	(NO3)	(B)	180°C)	TUENTS)	PER	PER	(CA,MG)	NESS	RATIO	(MICRO-	
DATE	(MG/L)	(UG/L)	(MG/L)	(MG/L)	AC-FT)	DAY)	(MG/L)	(MG/L)		MHOS)	(UNITS)
ост.											
01-31	4.0		569	528	.77	15700	270	142	2.0	835	7.9
NOV.											
01-30	3.4		585	548	.80	18700	274	136	2.1	840	8.0
DEC.						20100					
01-31 JAN.	3.6		562	550	.76	20100	274	132	2.2	847	8.0
01-31	4.2		617	599	.84	19100	300	158	2.2	936	7.9
FEB.						2,200	•••				
01-28	4.4		662	639	.90	14300	314	165	2.4	975	8.3
MAR.						15000					
01-31 APR.	5.0		705	683	.96	15000	332	180	2.4	1040	ė.o
01-30	4.0	830	693	685	.94	29600	334	192	2.2	1040	8.4
MAY											
01-31	3.5		673	661	.92	26800	332	188	2.3	1020	8.1
JUNE 01-30	3.0		. 634	600	0.	22400	308	172		933	
JULY	3.0		. 634	600	.86	22400	308	1/2	2.1	933	8.4
01-31	3.7		629	588	.86	21400	300	167	2.1	916	8.3
AUG.											
01-31	3.7		578	571	.79	18900	290	160	2.1	895	8.3
SEP. 01-30	3.8		568	554	.77		202	152	1.9	863	8.4
01-30	3.0		368	554	•//		282	152	1.9	803	8.4
WTD. AVG.	3.8		622	601	.85		301	163	2.2	929	8.2
TIME WID.											
AVG. TOT. LOAD	3.9		623	600	.85		301	162	2.2	928	8.2
(TONS)	44700		7340000	7085000							
				ANALYSI	S OF ADDI	TIONAL SA	MPLES				
OCT.											
21			559		.76	26600	270	144	1.8	830	8.1
NOV.						20000				000	
20 DEC.			536		.73	26900	273	145	1.8	795	7.9
15			554			20000					_
JAN.			334		.75	28000	280	149	1.9	835	7.8
20			619		.84	24100	308	168	2.1	930	7.6
FEB.											,
15 Mar.			647		.88	5610	324	181	2.1	970	8.0
18			698		.95	23900	350	201	2.0	1000	
APR.			• • • •		• / 0	23700	330	:01	2.3	1080	8.1
20			694		.94	26200	350	201	2.3	1080	8.0
MAY 19											
JUNE			667		.91	35500	326	186	2.2	1000	8.0
16			627		.85	11000	312	178	2.0	940	8.1
JULY					_						
17 AUG.			623		.85	24200	304	172	2.0	930	7.9
18			595		.81	32500	294	164	2.0	910	
			٠,٠		.01		474	104	2.0	410	8.1

## 09380000 COLORADO RIVER AT LEES FERRY, ARIZ .-- Continued

## SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	(ONCE-DAILY MEASUREMENT)											
DAY	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	836	836				989			923	928	929	856
2	815		804	957	978	1000	1010	1020	946	932		
3	792	838			992	1000	1030	1020	961	935	903	860
4	797	842	~		986	986	1010	1020	953	921	901	862
5		846	815	894	954	1030	997	1010	943	930	917	870
6	783	844		906	981	1020	1020	1040	943	925	914	870
7	811	840		913	~	1040	1030	1030	930	928	910	883
8	837		844	915	981	1040	1030	1040	933	921	907	868
9	845		836	910	981	1050	1010	1040	954	916	905	869
10	809	861	830	899	978	1030	1010	1040	921	914	912	
11		819	848	888	964	1030	1010	1020	941	919	910	889
1.2		834	860	868	959	1050	1060	1040	933	940	905	873
13	851	846		899	954	1050	1060	1040	946	923	882	879
14	838	856	873	910	949	1050	1050	1050	948	921		884
15	828		854	934	975	1080	1070		948	919		873
16	855		844	934	986	1080	1010	1010	951	914	907	875
17	830		852	920	1040	1060	1020		946	919	889	875
18		918	852	927	1040	1030	1020	1030	948	912		866
19		886	844	927	1020	1040	1050	1030	943	914	902	867
20	849	827		942	972	1060	1050	1020		935	886	872
21	835	829		932	931	1060	1020	1020		910		870
22	795	814	840	942	929	1060	1080	1010	921	908		856
23	818			944		1070	1060	1010	926	912		865
24	851	827		944	944	1070	1040	1010	926	923	888	848
25		850			954	1070	1030	985	930		882	
26		836		952	1000	1030	1030	976	918		889	838
27	859		~	973	1000	1040	1040	979			884	838
28	871	815		975	1000	1050	1060	976		919		848
29	889	839	894	1000		1050		1000	928	905		861
30	875		877	983		1050			940	916	869	859
31	841		873							914	871	
AVG				930	978	1040	1030	1020	938	920		866

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

					TUNCE-D	ALLT MEAS	UKEMENII					
DAY	DCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	18.0				7.8			11.0	12.0	15.0	17.0
2	17.0		10.0	9.0	5.0	8.0	9.0	12.0	12.0	12.0	13.0	
3	17.0	16.0			7.5	7.8	9.0	11.0	11.0	12.0	16.0	17.0
4	17.0	15.0			8.0	8.0	9.0	11.0	11.0	15.0	16.0	17.0
5		14.0	10.0	7.0	7.5	8.0	9.0	11.0	12.0	15.0	16.0	15.0
6	15.0	14.0		7.0	7.5	8.0	9.0					
7	17.0	14.0		7.0	7.5	8.0	9.0	10.0	12.0	12.0	16.0	14.0
8	17.0		8.0	7.0	8.0	8.0		10.0	12.0	12.0	16.0	14.0
9	17.0		8.0	7.0	8.0	8.0	9.0 9.0	10.0 10.0	12.0	12.0	16.0	17.0
10	17.0	12.0	8.0	7.0	8.0	8.0	9.0	10.0	12.0 12.0	15.0	16.0	17.0
		22.0	0.0	7.0	8.0	0.0	9.0	10.0	12.0	15.0	16.0	~
11		14.0	11.0		8.0	8.0	9.0	10.0	12.0	15.0	16.0	14.0
12		13.0	8.0	7.0	8.0	8.0	9.0	10.0	12.0	15.0	16.0	16.0
13	15.0	13.0		6.0	8.0	8.0	9.0	10.0	12.0	15.0	16.0	15.0
14	16.0	13.0	10.0	6.0	8.0	8.0	9.0	10.0	12.0	15.0		15.0
15	16.0		5.0	6.0	8.0	8.0	9.0		12.0	15.0		13.0
1.6	16.0		10.0	4.0	8.0	8.0						
17	17.0		10.0	6.0	7.5	8.0	9.0	10.0	12.0	15.0	16.0	14.0
18		10.0	9.0	5.0	7.5	9.0	9.0 9.0	11.0	12.0	15.0 15.0	16.0	14.0
19		10.0	8.0	5.0	7.0	9.0			12.0			15.0
20	16.0	10.0		5.0	7.5	9.0	9.0	11.0	12.0	15.0	16.0	15.0
	20-0	2000		5.0	1.5	9.0	9.0	10.0		13.0	16.0	15.0
21	16.0	11.0		5.0	8.0	9.0	9.0	10.0		14.0		15.0
22	16.0	10.0	10.0	5.0	8.0	9.0	9.0	11.0	15.0	15.0		14.0
23	16.0	. ===		4.0		9.0	10.0	11.0	15.0	15.0		14.0
24	16.0	10.0		4.0	8.0	9.0	10.0	11.0	15.0	15.0	17.0	15.0
25		10.0			8.0	9.0	11.0	11.0	15.0		17.0	
26		10.0		4.0	8.5	10.0	11.0	11.0	13.0		17.0	16.0
27	16.0			4.0	8.0	10.0	11.0	11.0			17.0	16.0
28	16.0	11.0		3.0	8.0	9.0	11.0	12.0				16.0
29	16.0	10.0	9.0	2.0		9.0		11.0	12.0	15.0		15.0
30	16.0	~~~	8.0	2.0		9.0			15.0	15.0	17.0	15.0
31	16.0		9.0							15.0	17.0	
AVG				5.5	7.5	8.5	9.5	10.5	12.5	14.0		15.0

## 09380000 COLORADO RIVER AT LEES FERRY, ARIZ. -- Continued

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1976

	DATE	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	DATE	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCT	8, 1969	11700	4	126	APR 2	14400	39	1520
UCT		11900	5	161	MAY 2	13000	23	807
1 30	27	9610	29	752	MAY 28	15300	48	1980
NOV	5	12500	12	405	JUN 3	13800	2	75
NUV	12	12730	30	1030	JUN 10	13600	4	147
NOV	19	16000	18	778	JUN 15	11900	6	193
NOV	28	11500	19	590	JUN 22	16500	45	2000
DEC	5	16900	7	319	JUL 2	16000	5	215
DEC	13	11500	29	900	JUL 9	12900	3	104
VAL	9, 1970	16600	21	941	JUL 19	13300	4	144
JAN	23	7560	2	41	JUL 23	11600	43000	13500D0
JAN	26	7290	124	2440	JUL 27	10700	6	173
FEB	5	10800	4	117	AUG 3	12000	7	227
MAR	3	5270	6	85			•	

### PARIA RIVER BASIN

### 09382000 PARIA RIVER AT LEES FERRY, ARIZ.

LOCATION. -- Lat 36°52'20", long 111°35'38", in NW1NE1 sec.13, T.40 N., R.7 E., Coconino County, at gaging station 0.6 mile northwest of Lees Ferry and 1.1 miles upstream from mouth.

DRAINAGE AREA, -- 1,410 sq mi.

PERIOD OF RECORD. -- Chemical analyses: October 1947 to February 1950, October 1969 to September 1970 (partial

### EXTREMES. -- 1969-70:

KLEMBO. --1303-70: Specific conductance: Maximum daily, 3,300 micromhos Aug. 17; minimum daily, 450 micromhos Apr. 17. Water temperatures: Maximum, 35.0°C June 26, July 2, 4; minimum, freezing point on Jan. 26-30, Feb. 2, 3. Sediment concentrations: Maximum daily, 328,000 mg/l Aug. 21; minimum daily, 5 mg/l May 31. Sediment discharge: Maximum daily, 435,000 tons Aug. 21; minimum daily, 0.03 ton May 31.

### Period of record:

Privator record:
Specific conductance: Maximum daily, 4,000 micromhos Aug. 12, 1969; minimum daily, 320 micromhos May 21, 1967.
Water temperatures (1956-61, 1965-70): Maximum, 35.5°C Aug. 11, 1958, July 29, 1960; minimum, freezing point on many days during winter periods.
Sediment concentrations: Maximum daily, 780,000 mg/l Aug. 9, 1968; minimum daily, 1 mg/l June 1-10, 1950.
Sediment discharge: Maximum daily, 5,100,000 tons Sept. 12, 1958; minimum daily, 0 ton on many days of most vears.

DIS-

years.

### CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

BTC-

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MO/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
ост.									
21 JAN.	1345	21	152	67	61	5.8	166	0	722
21 APR.	1630	30	110	54	100	4.8	190	0	514
20 JULY	1345	5.2	52	23	34	2.8	154	3	142
17	1245	4.5	62	28	37	5.2	160	0	191
	DIS- SOLVED CHLO- RIDE	DIS- SOLVED SOLIDS (RESI- DUE AT	DIS- SOLVED SOLIDS (TONS	HARD- Ness	NON- CAR- BONATE HARD-	SODIUM AD- SORP- TION	SPECI- FIC COND- UCTANCE	РН	TEMPER-
DATE	(CL) (MG/L)	180°C) (MG/L)	PER AC-FT)	(CA,MG) (MG/L)	NESS (MG/L)	RATIO	(MICRO- MHOS)	(UNITS)	ATURE (DEG C)
	(MU/L)	(MG/L)	AC-FII	(MG/L)	(MO/L)		nnus /	(UNI15)	(DEG C)
0CT. 21 JAN.	28	1200	1.63	656	520	1.0	1580	7.8	11.0
21 APR.	23	937	1.27	498	342	2.0	1270	7.4	8.0
20 JULY	13	394	.54	224	93	1.0	575	8.4	21.0
17	17	484	.66	272	141	1.0	701	8.2	32.5

## PARIA RIVER BASIN

## 0938 2000 PARIA RIVER AT LEES FERRY, ARIZ .-- Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

					(ONCE-D	AILY MEAS	UKEMENII					
DAY	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
	900					1200	1200		550	700	800	700
2	700		1200		1400	1300	1200		550	700		800
1 2 3	650	1400	1400		1400	1400	1300	950	550		500	800
4	850	1400			1400	1500	1200	950	550	700	900	1000
5		1300	1500	700	1500	1400	1200	900	550	650	3040	900
6	1100	1300		600	1400	1400	1200	650	550	1050	1800	900
7	1100	1300		650	1400	1300	1200	450	600	900	2070	800
8	850		1400	1600	1400	1400	800	550	2350	850	2800	800
9	700	1400	1500	1400	1400	1300	800	600	2500	1200		2000
10	750	1450	1600	1400	1400	1300	800	600	2400	1300	2000	1600
11		1400	1450	1400	1400	1300	800	600	1800	3000	1900	1000
12		1400		1500	1300	1200	850	600	1900		1000	1100
13	900	1400		1400	1200	1200	800		1900	3000	1000	2750
14	1000	1400	1400	1400	1200	1300	850		1700	1400	800	1900
15	1200		1300	1200	1200	1300	700		1600	1100		2000
16	1200			1200	1200	1300	600		900	750	3000	1500
17	1300		1400	1200	1100	1300	450		800	700	3300	1500
18		1200	1450	1400	1100	1200	550	550	700	800		1700
19	1500	1250	1450	1400	1200	1200	600	600	650	800	1950	1600
20	2000	1250		1400	1200	1100	600	600		700	1500	1000
21	1600	1400	1500	1400		1100	550	600			2730	1000
22	1650		1200	1100	1400	1100	600	550	600	1200	2500	950
23	1200			1200	1400	1200	750	550	600	3000		900
24	2000	1500				1200	700		600	1500	1800	800
25		1400			1400	1200	550	550	600		1700	
26		1300		1400	1400	1200	550	550	550		1200	750
27	1500			1400	1400	1200	750	550		2530	1450	700
28	1500	1500		1400		1200	600	550		1230	1400	700
29	1500	1300		1400		1200		550	600	1200	1300	700
30	1400		1300	1300		1200	1400		750	1000		500
31	1400		1300			1200				1000	1000	
AVG	1220			1270	1330	1250	832		1050	1270	1740	1150

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

044	OCT	MOA	DEC	VAL	FE8	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.0					5.0	12.0		20.0	74.0		
ż	15.0		5.0		0.0	7.5	10.0		28.0	34.0	25.0	28.0
3	18.0	16.0	5.0		3.0	9.0	11.0	18.0	30.0 20.0	35.0		30.0
á	17.0	6.0			0.0	8.0	11.0				26.0	28.0
5		10.0	5.0	1.0	2.0	6.0	10.0	18.0 18.0	20.0 25.0	35.0	29.0	26.0
,		10.0	,,,	1.0	2.0	B.U	10.0	18.0	25.0	32.0	26.5	21.0
6	19.0	12.0		1.0	2.0	7.0	11.0	18.0	28.0	26.5	26.5	21.0
7	21.0	10.0		1.0	3.0	12.0	11.0	19.0	24.0	29.0	27.0	15.0
8	14.0		6.0	1.0	2.0	12.0	10.0	19.0	23.0	27.0	27.0	23.0
9	13.0	14.0	4.0	1.0	5.0	12.0	10.0	19.0	21.0	27.5		23.0
10	15.0	14.0	8.0	1.0	5.0	12.0	10.0	22.0	22.0	28.0	30.0	21.0
11		15.0	7.0	1.0	5.0	9.0	10.0	22.0	22.0	25.0	30.0	27.0
12		10.0		1.0	5.0	10.0	10.0	22.0	24.0		29.0	22.0
13	12.0	13.0		1.0	8.0	10.0	10.0		20.0	24.0	31.0	21.5
14	12.0	8.0	0.0	2.0	0.0	11.0	12.0		25.0	26.0		20.0
15	19.0		0.0	2.0	0.0	10.0	12.0		22.0	27.0		9.0
16	15.0			2.0	9.0				•• •			
17	16.0		1.0	3.0		10.0	12.0		24.0	28.0		15.0
18	10.0	4.0	2.0		4.0	10.0	12.0		25.0	28.0	27.0	16.0
19	17.0	7.0		1.0	4.0	9.0	11.0	25.0	25.0	33.0		15.0
20	9.0		4.0	2.0	6.0	10.0	12.0	24.0	27.0	35.0	27.5	23.0
20	9.0	5.0		1.0	3.0	10.0	12.0	17.0		31.0	20.0	16.0
21	9.0	7.0	7.0	2.0		10.0	12.0	14.0			18.5	15.0
22	11.0		5.0	0.5	3.0	10.3	13.0	15.0	30.0	24.5	18.0	23.0
23	13.0			0.5	4.0	10.0	13.0	17.0	34.0	25.5		14.0
24	11.0	8.0				10.0	13.0		26.0	25.0	24.0	21.0
25		6.5			4.0	10.3	13.0	14.0	28.0		19.0	
26		4.0		0.0	2.0	10.0	15.0	20.0	35.0		25.0	23.0
27	11.0			0.0	2.0	11.0	17.0	18.0		26.0	21.0	20.0
28	15.0	5.0		0.0		10.0	15.0	22.0		26.0	19.0	20.0
29	10.0	5.0		0.0		10.0		30.0	28.0	26.0	29.0	18.0
30	12.0		1.0	0.0		10.0	15.0		29.0	25.0	27.0	19.0
31	16.0		1.0			10.0				27.0	25.0	17.0
AVG	14.0			1.0	4.5	9.5	12.0		25.5	28.5	25.0	20.5

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## 0938 2000 PARIA RIVER AT LEES FERRY, ARIZ.--Continued

		OCTOBER			NOVEMBER		DECEMBER			
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- Tration (MG/L)	SFOIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- Tration (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEY- TRATION (MS/L)	SEDIMENT DISCHARGE (TONS/DAY)	
1	5.0	111	1.5	18	470	23	20	1150	62	
2	6.0	90	1.5	20	500	27	23	1400	87	
3	9.4	110	2.8	22	430	26	28	1750	132	
4	B.2	110	2.4	21	399	23	30	1550	126	
5	7.0	115	2.2	22	370	22	30	1200	97	
6	5.0	132	1.8	22	365	22	24	1050	68	
7	5.0	110	1.5	23	310	19	16	920	45	
В	5.0	66	.89	28	380	29	22	1070	69	
9	6.5	88	1.5	29	860	67	26	1700	137	
10	6.5	71	1.2	30	590	48	31	1460	122	
11	6.0	70	1.1	25	550	37	25	1130	76	
12	6.5	90	1.6	25	370	25	22	1390	83	
13	6.0	138	1.7	23	350	22	24	1700	110	
14	6.5	112	2.0	22	285	17	24	1750	113	
15	7.0	170	3.2	22	290	17	25	860	59	
16	8.2	238	5.3	28	700	53	25	1270	86	
17	8.8	275	6.5	52	4600	646	25	1280	86	
18	8.8	190	4.5	28	3950	299	27	1140	83	
19	15	1330	54	21	1390	79	26	1060	74	
50	20	2150	116	20	1940	105	25	900	61	
21	22	1400	83	25	2360	159	22	713	42	
22	78	36670	9870	28	2170	164	24	690	45	
53	56	25700	3890	25	1300	88	24	650	42	
24	42	29200	3310	26	670	47	23	650	40	
25	25	17800	1200	24	630	41	23	600	37	
26	22	6500	386	25	700	47	22	600	36	
27	20	1480	80	25	730	49	23	650	40	
28	18	885	43	24	670	43	20	550	30	
29	16	660	29	21	650	37	8.5	570	13	
30	16	540	23	17	850	39	8.2	440	9.7	
31	17	435	20				4.7	500	6.3	
TOTAL	488.4		19147.19	741		2320	702.4		2117.0	

	JANUARY				FEBRUARY		MARCH			
DAY	MEAN Discharge (CFS)	MEAN CONCEN- Tration (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	
1	8.7	200	4.7	19	1600	82	37	3000	300	
2	5.5	150	2.2	23	1190	74	102	24700	6800	
3	12	200	6.5	19	1200	62	91	27000	6630	
4	18	250	12	19	960	49	52	8200	1150	
5	16	200	8.6	23	940	58	34	10500	964	
6	16	250	12	22	970	58	33	15000	1340	
7	24	260	17	21	940	53	25	3400	230	
8	26	440	31	22	690	41	28	1000	76	
9	30	1400	113	22	630	37	29	2400	188	
10	29	1620	127	21	495	28	26	3590	252	
11	30	2450	198	22	470	28	30	3330	270	
12	25	2580	174	22	460	27	24	1910	124	
13	30	2450	198	23	320	20	23	1710	106	
14	25	2500	169	24	170	11	22	880	52	
15	36	4610	448	32	710	61	21	580	33	
16	50	5820	786	22	720	43	22	1000	59	
17	59	5290	843	18	375	18	18	2570	125	
18	40	1050	113	18	390	19	18	1140	55	
19	42	1000	113	18	330	16	18	810	39	
20	35	750	71	18	290	14	18	830	40	
21	30	1150	93	21	490	28	17	840	39	
22	18	924	45	25	540	36	18	830	40	
23	26	924	65	30	490	40	18	1440	70	
24	30	820	66	26	560	39	15	630	26	
25	26	800	60	25	760	51	15	840	34	
26	25	861	58	24	520	34	17	460	21	
27	23	861	53	23	520	32	22	940	56	
28	24	930	60	23	590	37	19	750	38	
29	21	950	54				16	450	19	
30	14	890	34				17	300	14	
31	14	1290	49				20	390	21	
TOTAL	812.2		4084.0	625		1096	865		19211	

## PARIA RIVER BASIN

## 0938 2000 PARIA RIVER AT LEES FERRY, ARIZ .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	APRIL				MAY		JUNE				
DAY	MEAN Discharge (CFS)	MEAN CONCEN- Tration (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- Tration (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)		
1	17	375	17	10	200	5.4	2.5	14	•09		
2	14	285	11	11	115	3.4	2.7	44	.32		
2 3 4	17	223	10	7.0	104	2.0	2.2	42	.25		
	17	280	13	6.0	109	1.8	2.5	44	.30		
5	14	160	6.0	4.5	74	-90	2.8	48	.36		
6	14	200	7.6	4.0	27	.29	5.0	51	.69		
7	12	183	5.9	3.6	31	.30	5.5	61	.91		
8	8.2	245	5.4	4. D	35	.38	44	651D3	22600		
9	8 • 2	270	6.0	4.0	21	. 23	58	219000	34300		
10	7.6	160	3.3	3.6	20	.19	15	97500	3950		
11	6.5	111	1.9	3.6	22	-21	10	4310	116		
12	6.5	94	1.6	3 - 6	24	.23	8.0	4133	89		
13	4.0	78	. 84	3.6	20	.19	6.0	3100	50		
14	4.5	97	1.2	3.2	20	.17	5.5	2150	32		
15	5.0	39	.53	2.8	20	.15	4.5	1820	22		
16	5.0	43	.58	3.6	20	.19	4.0	500	5.4		
17	5.5	68	1.0	3.6	20	.19	4.0	300	3.2		
18	6.0	62	1.D	3.6	19	.18	4.0	180	1.9		
19	5.0	40	. 54	2.8	16	.12	4.0	150	1.6		
20	5.0	40	.54	2.8	23	-17	4.0	145	1.6		
21	5.5	42	.62	2.2	27	.16	4.0	130	1.4		
22	7.0	100	1.9	2.5	25	.17	4.D	110	1.2		
23	6.0	150	2.4	2.8	21	-16	4.0	92	.99		
24	5.5	52	.77	4.0	20	.22	3.6	93	.90		
25	5.0	25	. 34	3.6	16	.16	3.6	75	.73		
26	4.0	30	. 32	2.5	31	.21	3.2	67	.58		
27	4.0	91	. 98	3.2	26	.22	3 • 2	60	•52		
28	6.0	72	1.2	3.2	22	.19	3.2	50	•43		
29	6.5	80	1.4	2.8	6	- 05	3.2	52	•45		
30	9.4	194	4.9	3.6	20	.19	3.2	110	.95		
31				1.9	5	.03					
TOTAL	240.9		109.76	123.2		18.45	229.4		61183.77		

	JULY				AUGUST		SEPTEMBER			
DAY	MEAN DISCHARGE ICFS 1	MEAN CONCEN- Tration (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/OAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	
1	3.6	122	1.2	4.5	2800	34	5.0	2300	31	
2 3	4.0	110	1.2	3.6	2500	24	4.0	860	9.3	
3	4.0	100	1.1	2.5	2200	15	3.6	470	4.6	
4	4.0	70	.76	6.0	14000	227	3.6	375	3.6	
5	2.5	85	.57	146	191000	79100	4.0	350	3.8	
6	21	40800	2980	36	179000	17400	3.6	340	3,3	
7	8.D	22800	628	32	105000	11900	14	510	19	
8	49	170000	38100	21	98600	5590	20	430	23	
9	22	133000	7900	8.2	57200	1270	11	33700	1000	
10	33	65500	5840	13	40800	1430	5.0	31603	427	
11	96	153000	45400	6.5	20400	358	4.0	7000	76	
12	40	135000	14600	4.0	1230	13	5.5	7960	118	
13	13	137000	4810	3.?	1040	9.0	292	243000	265000	
14	9.4	118000	2990	4.0	1010	11	50	227000	30600	
15	4.D	19400	210	19	520DD	267D	18	111000	5390	
16	3.6	1950	19	37	106000	10600	10	74900	2020	
17	3.6	1410	14	36	9540D	9270	8.8	34700	824	
18	4.0	1710	18	31	94300	7B90	7.6	32600	669	
19	2.2	1750	10	135	136000	59000	7.0	12000	227	
20	6.0	1760	29	684	140000	350000	4.5	517	6.3	
21	6.0	1770	29	490	328D00	435000	5.5	220	3.3	
22	45	69300	8880	90	140000	34000	5.5	204	3.0	
23	17	794D0	3870	33	57200	5100	5.5	195	2.9	
24	6.5	36700	644	22	18400	1090	5.5	136	2.0	
25	15	81600	6710	12	1340	43	4.5	90	1.1	
26	21	172000	9750	8.2	3100	69	5.0	52	.70	
27	17	140000	6430	32	16800	1450	5.5	64	.95	
28	11	52000	I 540	28	8700	658	6.0	55	.89	
29	10	11000	297	12	21900	710	6.0	50	- 81	
30	7.0	6700	127	6.5	24500	430	6.0	16	. 26	
31	4.5	4500	55	6.5	9600	l 6B				
TOTAL	492.9		161884.83	1972.7		1035529.0	536.2		306470.81	

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR(TDNS)

7829.3 1613171.81

### PARIA RIVER BASIN

### 09382000 PARIA RIVER AT LEES FERRY, ARIZ .-- Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, MATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM MITHDRAMAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

			WATER			PARTICLE SIZE												
			TEM- PERA-			SUSPENDED SEDIMENT	PERC	NT F	INER 1	THAN	THE S	ZE (	IN MI	LIME1	ERS)	INDI	CATED	METHOD OF ANALY-
	DATE	TIME	TURE (°C)	(CFS)	TRATION (MG/L)	DISCHARGE (TONS/DAY)	.002	.004	.008	.016	.031	.062	.125	.250	•500	1.00	2.00	
OCT	72. 1969	1700	11.0	114	68400	21100	39	49		71		96	99	100				VPHC
NOV	18	1145	04.0	26	4170	293	57	66		90		96	97	100				Abac
	21			22	618	37	60	72		80		88	92	99	100			SPWC
	2. 1970			8.8	115	2.7						86	90	97	100			5
JUN				60	223000	36100	52	60		80		94	98	100				Ab 4C
AUG	5	2130	26.0	34	116000	10600	42	52		71		90	98	100				ABMC

### LITTLE COLORADO RIVER BASIN

### 09401200 LITTLE COLORADO RIVER AT CAMERON, ARIZ.

LOCATION.--Lat 35°52'40", long 111°24'40", in NE4SE4 sec. 22, T.29 N., R.9 E. (unsurveyed), Coconino County, in Navajo Indian Reservation, at bridge on U.S. Highway 80 at Cameron, 2.5 miles upstream from Mocakopi Wash, 9 miles upstream from Coconino Dam site, 12 miles upstream from gaging station near Cameron (station 09402000), and 57.5 miles upstream from mouth.

DRAINAGE AREA. -- 26,500 sq mi, approximately (at gaging station).

PERIOD OF RECORD, --Chemical analyses: October 1950 to September 1958. Specific conductance: October 1964 to September 1970 (discontinued). Water temperatures: October 1951 to September 1970 (discontinued). Sediment records: October 1947 to September 1970 (discontinued).

### EXT REMES . -- 1969-70:

Kumas. --1999-70; Specific conductance: Maximum daily, 3,000 micromhos Mar. 12, 13; minimum daily, 500 micromhos Mar. 27. Sediment concentrations: Maximum daily, 151,000 mg/l Sept. 7; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 1,850,000 tons Sept. 7; minimum daily, 0 ton on many days.

### Period of record:

Specific conductance: Maximum daily, 3,000 micromhos May 12, 13, 1970; minimum daily, 250 micromhos Dec. 20, 1966.

Sediment concentrations: Maximum daily, 228,000 mg/l Aug. 30, 1966; minimum daily, no flow on many days each year.

Sediment discharge. Maximum daily, 2,580,000 tons Sept. 21, 1952; minimum daily, 0 ton on many days each year.

REMARKS. -- Appreciable inflow, mostly from Moenkopi Wash, may occur between sampling site and gaging station during periods of local storm runoff. Sediment loads are computed using discharge at gaging station and include estimated loads from Moenkopi Wash. No flow Oct. 1-3, 15-20, Dec. 31, Jan. 1-14, 28-31, Feb. 1-28, Apr. 29, 30, May 1-31, June 1-30, July 1-6, 9-20, 25-31, Aug. 1, 2, Sept. 30.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970
(ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		1000					650					
2		1.050				675	550					
3		1050				750	675					
4		1000				700	650				600	
5		1050				800	625				1000	
6		1100					775				1080	1200
7		1000					1300				1150	1400
8		1100					1400				1100	900
9		1100					900				1100	900
10		1100					900				925	850
11		1400					700				850	765
12						3000	650				1100	900
13						3000	600				1200	800
14						2800	600				1200	700
15						1400	600				1200	700
16						1000	550				1200	1000
17						1000	650				1200	800
18						950	600				1100	900
19						900	730				1000	950
20						900	600				1200	800
21				~-		900	600				1050	800
22	533					900	600				1200	950
23	725					700	650				1300	1000
24	1600					600	650				1200	1000
25	1020	1000				650	700				1200	1100
26	950					585	1000				1300	1050
27	1020					500	975				1230	
28	1000					800					1400	
29	1000			~-		700					1400	1050
30	1000					700						
31	1000			~-		550						
AVG				~		1060	736				1130	

### LITTLE COLORADO RIVER BASIN

## 09401200 LITTLE COLORADO RIVER AT CAMERON, ARIZ. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	DCT	NDV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		15.0					12.0					
ž		15.0				13.0	14.0					
3		15.0				13.5	15.0					
4		15.0				15.0	09.0				29.0	
5		15.0				12.0	17.0				29.5	
6		15.0					19.0				26.0	20.0
7		15.0					18.0				30.5	23.5
8		15.0					15.0				26.5	24.0
9		15.0					18.5				29.0	20.5
10		15.0					19.0				29.0	21.5
11		12.0					15.0				29.0	23.0
12						16.0	18.0				26.0	21.5
13						15.0	18.0				24.5	22.0
14						16.0	09.0				28.5	21.5
15						10.0	14.5				25.0	17.5
16						16.0	11.5				25.0	20.5
17						14.0	10.5				28.0	17.5
18						10.0	15.5				25.D	15.5
19						14.0	09.0				25.0	18.5
50		20.0				14.0	18.0				25.0	17.0
21						15.0	13.0				25.0	15.0
žž	16.5					14.0	16.5				25.0	14.0
23	15.0					15.0	20.0				25.0	18.0
24	14.0					17.0	21.0				28.0	15.5
25	15.0					14.0	15.0				28.0	11.0
26	16.5					11.5	18.0				28.0	18.0
27	16.0					11.0	17.5				27.0	
28	12.5					12.5					29.5	
29	13.5					13.0					20.0	12.5
30	13.5					09.0						
31	13.5					08.0						
AVG						13.0	15.5				26.5	18.5

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, MATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL; ACCUMULATION TUBE; N, IN DISTILLED WATER)

			WATER TEM-			SUSPENDED					PART	ICLE	SIZE					METHOD
			PERA-	DISCHARGE		SEDIMENT DISCHARGE	PERC	ENT F	INER	THAN	THE S	IZE (	EN MI	LLIME	TERS)	INDI	CATED	
	DATE	TIME	( °C)	(CFS)	(MG/L)	(TOYS/DAY)	•002	.004	.008	.016	.031	.062	.125	.250	-500	1.00	2.0D	
OC f	28, 1969	1200	11.0	89	73400	17600	81	90		99		100						SPHC
ADA	25	1300	20.0	21	28300	1600	86	98		100								SPHC
	27, 1970	L300	17.0	•50	431	.58	76	78		91		92	96	100				
	27	1130	23.0	14	53000	2000	92	98		100								SPWC
SEP	11	1500	23.0	824	21800	48500	76	82		90		98	100					VPWC

## LITTLE COLORADO RIVER BASIN

## 09401200 LITTLE COLORADO RIVER AT CAMERON, ARIZ. -- Continued

		OCTOBER			NOVEMBER			DECEMBER	
		MEAN			MEAN			MEAN	
	MEAN	CONCEN-	SEDIMENT	MEAN	CONCEN~	SEDIMENT	MEAN	CONCEN-	SEDIMENT
	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE	DISCHARGE	TRATION	DISCHARGE
DAY	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)	(CFS)	(MG/L)	(TONS/DAY)
1	o o	0	0	30	55100	4460	3.1	6000	50
2	0	0	0	25	45400	3060	2.0	4000	22
3	0	0	0	20	43900	2370	1.8	2000	9.7
	32	L 2900	2120	20	37200	2010	1.6	2000	8.6
5	26	12000	842	18	29600	1440	1.4	2000	7.6
6	31	10300	862	18	28600	1390	1.2	2000	6.5
7	16	5000	216	16	33200	1430	1.0	1000	2.7
8	9.2	3000	75	16	40300	1740	.70	500	.95
9	5.4	3000	44	15	30100	1220	-60	500	-81
10	2.6	2000	14	14	28000	1060	.50	200	•27
11	1.6	1000	4.3	13	23500	825	•50	200	•27
12	.80	530	1.1	12	20400	661	.50	200	.27
13	.40	500	• 54	11	19400	576	•50	200	•27
14	.10	200	.05	10	19400	524	. 50	200	•27
15	0	0	0	24	45900	2970	•50	200	-27
16	0	٥	0	37	62400	6230	.50	200	•27
17	0	0	0	30	55100	4460	- 50	200	.27
18	0	0	0	28	45900	3470	•50	200	•27
19	0	0	0	26	44900	3150	•50	200	-27
20	0	0	0	25	44900	3030	-50	200	•27
21	215	12900	45900	24	40800	2640	-50	200	.27
22	658	59100	116000	23	30600	1900	•50	200	-27
23	148	25500	10200	22	27500	1630	•50	200	•27
24	603	104000	266000	22	27500	1630	-50	200	•27
25	475	102000	131000	21	27500	1560	-50	200	.27
26	292	92800	73200	16	25500	1100	.50	200	•27
27	138	90100	33600	13	20400	716	•50	200	•27
28	71	75900	14600	7.4	10000	200	.50	200	•27
29	50	70200	9480	8.6	12000	279	1.1	200	. 59
30	40	65500	7070	4.7	6000	76	-20	88	•05
31	35	63400	5990				0	0	0
TOTAL	2850.10		717218.99	569.7		57807	24.20		114-63

		JANUA RY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SED (MENT DI SCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE {CFS}	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	٥	٥	0	0	0	0	32	250	1030
2							407	40400	51200
3							50	29900	4040
4							30	32500	2630
5							20	21800	1180
6							15	18700	757
7							12	18200	590
8							10	16300	440
9							9.0	14800	360
10							8.0	13000	281
11							7.0	9000	170
12							6.0	5900	96
13							5.0	6700	90
14	0	0	0				5.0	6100	82
15	2.0	29600	232				5.0	4800	65
16	4.0	32100	347				5.0	6000	81
17	3.8	23000	236				5.0	6500	88
18	5.7	30600	471				5.0	7100	96
19	3.4	20400	187				5.0	5500	74
20	2.4	20400	132				5.0	4500	61
21	2.2	15000	89				114	24300	10700
22	2.2	15000	89				180	29200	14200
23	2.2	15000	89		~~		133	23500	8440
24	1.8	15000	73				95	17300	4440
25	1.4	12000	45				70	15200	2870
26	.40	10000	11				65	10200	1790
27	.10	5000	1.4				320	20700	31000
28	0	0	0	0	0	0	296	35900	33800
29							157	11000	4660
30	~-						143	9500	3670
31	0	0	0				442	18700	31300
TOTAL	31.60		2002.4	0		0	2661.0		210281

## LITTLE COLORADO RIVER BASIN

## 09401200 LITTLE COLORADO RIVER AT CAMERON, ARIZ. -- Continued

		APRIL			MAY			JUNE	
DÂY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	539	18890	31300	0	0	0	0	0	0
2	141	14930	5670						
3	88	10300	2450						
4	62	9630	1610						
5	55	8000	1190						
6	67	6000	1090						
7	53	4700	673					_	
8	34	5700	523						
9	128	14100	5330						
10	143	16200	6250						
11	121	12900	4210						
12	121	12800	4180						
13	126	14000	4760						
14	101	9400	2560						
15	99	9800	2620						
16	93	10500	2640						
17	95	7700	1980						
18	77	5800	1210						
19	60	5600	907						
20	45	3600	437						
21	30	5000	405						_
22	23	3200	199						
23	15	2400	97						
24	10	1400	38						
25	5.0	1100	15						
26	2.0	700	3.8						
27	.30	473	.38						
28	-10	100	. 03						
29	0	0	0				- <del>-</del>		
30	0	0	0				0	0	0
31				0	0	0			
TOTAL	2333.40		82348.21	0		0	0		0

## 09401200 LITTLE COLORADO RIVER AT CAMERON, ARIZ .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JULY			AUGUST			SEPTEMBER	
DAY	ME AN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	.30	20400	17
2				0	ō	Ö	2.0	52000	281
2		~-		92	13500	30900	1.2	25500	83
4				596	87900	183000	.30	10000	8.1
5		~-		75	38800	7860	*1	13600	11500
6	0	0	0	27	24500	1790	3860	115000	1520000
7	6.6	7060	570	177	74900	35800	3880	151000	1850000
8	.10	6100	1.6	121	76400	25000	3320	78000	699000
9	0	0	0	554	130000	202000	4560	72300	890000
10	~~			351	108000	102000	6130	59200	980000
11	~-			250	98000	66200	1200	31100	101000
12				150	111000	45000	385	17300	18000
13				50	103000	13900	180	17300	8410
14				20	92200	4980	192	22300	11600
15				10	89600	2420	260	23500	16500
16				5.0	89000	1200	375	24500	24800
17				294	87800	75300	226	40300	24600
18	~-			642	110000	190000	124	45900	L 5400
19				985	84800	268000	73	36700	7230
20	0	0	0	991	14/000	411000	48	26300	3410
21	184	24500	54800	553	124000	185000	32	22400	1940
22	171	51200	34900	532	142000	201000	19	18300	939
23	5.0	12300	166	141	107000	40700	14	25400	960
24	1.0	2000	5.4	119	107000	34400	8.6	32100	745
25	0	0	0	61	85900	14100	4.0	32700	353
26				28	60700	4590	1.4	25500	96
27				14	56200	2120	•60	12200	20
28				6.6	55100	982	-20	12000	6.5
29				3.1	52500	439	.10	14000	3.8
30				1.6	52000	225	0	0	0
31	0	0	0	-60	25500	41			

6849.90 -- 2149947

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

90443.0

TOTAL 367.70 --

40655.30 9497064.63

24967.70 -- 6186902.4

## 09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.

LOCATION.--Lat 36°06'05", long 112°05'06", in sec.5, T.31 N., R.3 E (unsurveyed), Coconino County, in Grand Canyon National Park, at lower gaging station upstream from Kaibab Bridge, 0.4 mile upstream from Bright Angel Creek, 4.5 miles northeast of village of Grand Canyon, 25 miles downstream from Little Colorado River, 104 miles downstream from Glen Canyon Dam, and 267 miles upstream from Hover Dam.

DRAINAGE ARRA,--137,800 sq mi, approximately.

PRRIOTO OF RECORD.--Chemical analyses: August 1925 to November 1942, September 1943 to September 1970.

Water temperatures: October 1936 to October 1942, September 1943 to September 1970.

EXTREMES.--1969-70:

Dissolved solids: Neximum 1 060 mg/l Sept 7, minimum 615 mg/l Aug. 22-31

NRMES, --1969-70:
Dissolved solids: Maximum, 1,060 mg/l Sept. 7; minimum, 615 mg/l Aug. 22-31.
Hardness: Maximum, 544 mg/l Sept. 7; minimum, 284 mg/l Oct. 1-31.
Specific conductance: Maximum daily, 1,470 micromhos Sept. 7; minimum daily, 859 micromhos Dec. 4.
Water temperatures: Maximum, 19,0°C Sept. 11; minimum, 8.0°C Jan. 30, 31.
Sediment concentrations: Maximum daily, 47,100 mg/l Sept. 7; minimum daily, 6 mg/l Jan. 26.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	MEAN DIS- CHARGE (CFS)	DIS- SOLVEI SILICA (SIO2)	CIUM (CA)	NE- SIUM (MG)	DIS- SOLVED SODIUM (NA) (MG/L)		DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	RIDE (CL)
OCT. 01-31	10800	11	75	24		91		172	0	214	80
NOV. 01-30 Dec.	12600	9.5	66	30		89		166	0	232	72
01-31 JAN.	13500	10	70	28		94		176	0	233	74
01-18	14400		81	25		94		186	0	237	75
19-26	9400		91	25		105		194	0	249	95
27-28	9200	12	91	27		138		188	4	272	133
29-31	11300	12	90	27		108		182	6	262	95
F€B.											
01-28	8890	11	85	29		115		189	0	264	104
MAR.											
01-31	8290	12	89	30		119		189	0	282	106
APR.											
01-304	16300	9.1	86	31	101		3.8	183	1	276	86
MAY											
01-31	15400	8.9	87	31		109		192	1	286	88
JUNE											
01-30	13800	8.7	81	28		103		167	4	272	80
JULY											
01-31	13200	8.3	80	27		101		171	0	267	78
AUG.											
01-18	11800	8.7		27		100	~-	169	2	252	81
19-21	14200	11	111	24		115		186	0	336	82
22-31 SEP.	14800	9.1	82	25		88		171	0	238	77
01-06	12900	8.0	73	27		90		148	5	239	77
07	12100	12	156	38		145		224	ō	544	76
08-30	12700	8.1	74	25		101		177	ŏ	232	82
			• •	20				.,,	v	232	04
WTD. AVG. Time WTD.		9.6	80	28		101		178	1	256	83
AVG. TOT. LOAD	12600	9.7	80	28		102		178	1	256	84
(TONS)		119000	995000	347000		119000		2207000	10000	182000	032000

A INCLUDES 0.4 MG/L OF DISSOLVED FLUORIDE (F).

## 0940 2500 COLORADO RIVER NEAR GRAND CANYON, ARIZ. -- Continued

EXTREMES. --1969-70: --Continued
Sediment discharge: Maximum daily, 1,460,000 tons Sept. 7; minimum daily, 55 tons Jan. 26.
Period of record (1965-70):
Dissolved solids: Maximum, 1,060 mg/l Sept. 7, 1970; minimum, 360 mg/l Aug. 7-31, 1965.
Hardness: Maximum, 544 mg/l Sept. 7, 1970; minimum, 184 mg/l Sept. 1-30, 1965.
Specific conductance: Maximum daily, 1,570 micrombos Jan. 30, 1968; minimum daily, 561 micrombos Sept. 3, 1965.

Nater temperatures: Maximum, 23.0°C Sept. 4, 1967, Sept. 9, 10, 1968; minimum, 4.0°C Jan. 4, 1966, Jan. 7, 1968.
Sediment concentrations: Maximum daily, 47,100 mg/l Sept. 7, 1970; minimum daily, 4 mg/l Nov. 7, 1966.
Sediment discharge: Maximum daily, 1,460,000 tons Sept. 7, 1970; minimum daily, 55 tons Nov. 7, 1966, Jan. 26,

1970.

REMARKS. --Because of the regulation of flow by Glen Canyon Dam since Mar. 13, 1963, and the subsequent filling of Lake Powell, extreme values for the period of record include only those obtained after July 31, 1965.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.											
01-31 NOV.	5.3		633	585	.86	18400	284	143	2.3	957	8.1
01-30	3.1		646	584	.88	22000	288	152	2.3	932	7.9
DEC. 01-31	3.3		628	599	.85	22900	290	146	2.4	942	8.1
JAN.											
01~18	5.6		648	620	.88	25200	304	152	2.4	970	8.2
19-26	5.1		712	676	. 97	18100	328	169	2.5	1050	8.1
27-28	7.2		876	776	1.19	21800	336	176	3.3	1200	8.3
29-31	7.0		727	696	.99	22200	336	177	2.6	1090	8.4
FEB.											
01-28	6.7		725	708	.99	17400	332	177	2.8	1110	8.2
MAR.											
01-31	7.0		758	738	1.03	17000	344	189	2.8	1120	7.9
APR.											
01-30	3.8	160	740	884	1.01	32500	342	190	2.4	1100	8.3
MAY										1000	
01-31	4.0		711	709	. 97	29500	346	187	2.6	1080	8.3
JUNE										1000	8.4
01-30	3.2		679	662	. 92	25300	318	174	2.5	1020	8.4
JULY										4000	8.2
01-31	3.0		653	648	.89	23400	310	170	2.5	1000	8.2
AUG.			****		0.7	20300	304	162	2.5	1000	8.3
01-18	3.2 8.4		7638 791	635 778	.87 1.08	30300	376	224	2.6	1190	8.0
19-21 22-31	1.0		615	604	.84	24600	306	166	2.2	994	8.1
SEP.	1.0		613	804	.04	24600	306	100	2.2	774	0
01-06	3.6		666	596	. 91	23300	294	164	2.3	948	8.2
07	2.5		1060	1080	1.44	34600	544	360	2.7	1480	7.6
08-30	4.3		671	613	.91	23000	286	141	2.6	980	8.2
08-30	4.3		6/1	613	. , ,	23000	200		2.0	,,,,	
WTD. AVG.	4.1		680	651	.93		315	168	2.5	1020	8.2
TIME WTD.					.93		315	167	2.5	1020	8.2
AVG.	4.3		682	653	.93		315	16/	2.5	1020	0.2
TOT. LOAD (TONS)	51500		8442000	8079000			~-				

## 09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ. -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	872	945	916	938	1090	1100	1140	1120	1060	1050	1000	928
2	937		888	994	1080	1110	1120	1120	1050	1000	984	941
3	1010	920	865	936	1200	1170	1130	1130	1010	1040	997	967
4		949	859	946	1080	1090	1110	1130	1020	997	976	949
5	937	914	880	1060	1110	1150		1090	1050	991	1010	967
6	1010	916	875	1060	1100	1200	1060	1090		997		992
7	1100	914	884	997	1100	1130	1080	1070	1080	980		1470
8	954	909	927	975	1140	1160		1100	1060	997		1050
9	934				1080	1160		1110	1060	1000		986
10	929			967	1240	1230		1090	1030	1010		989
11				992	1110	1200		1140	1020			938
12				983	1050	1110		1100	1010	1010		980
13	949		897	1020	1040	1150	1100	1100		1030		972
14	944		1010		1070		1090	1090	1030	1060		975
15		923	960		1110	1200	1100	1070	1020	991	984	1070
16	920	968	960	1000	1040		1120	1080	1000	977	1000	1040
17	922	952	925	994	1170	1210	1080	1070	1030	986	1030	1030
18	927	940	897	997	1100	1200	1100	1060	1050	972	1040	1020
19	967	965	902	1100	1150	1180	1100		1040	969	1120	972
20		955	893	1030	1100	1200	1120	1090	1020	1000	1140	972
21	981	925	950	1010	1130	1190	1110	1070		1010	1260	951
22	942	895	932	1090	1120	1130	1120	1080	994	1060	1020	967
23	903	950	920	1120	1120	1130	1140	1070	1010	986	1020	1010
24	896	923	947	1110			1130	1090	994	983	1060	951
25	1070	906	1010	1070	1210		1090	1060	1030		1020	919
26	981	930	1010	1140	1050	1130	1100	1040	1020	1040	940	914
27	967	925	1100	1280	1080	1190		1060	988	1010	940	924
28	1010	932	1010	1200	1100	1130	1080	1080		991	981	944
29	957	975	1020	1090		1110	1130		994	1000		986
30	952	927	1050	1120		1060	1140	1050	980	1060	986	914
31	947		945	1110		1060		1090		972	936	
AVG	958		942	1050	1110	1150		1090	1030	1010		990

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B. BOTTOM WITHDRAWAL TUBE: C. CHEMICALLY DISPERSED; N. IN NATIVE WATER; P. PIPET; S., SIZEVE; V. YISUAL ACCUMULATION TUBE; W. IN DISTILLED WATER)

	WATER			***					PART	ICLE 5	IZE					METHOD
	TEM- PERA- TURE	DISCHARGE		SUSPENDED SEDIMENT DISCHARGE	PERCE	NT F	INER '	THAN	THE S	IZE (1	N MI	LLIME	rers)	INDI	CATED	OF ANALY-
DATE	TIME (°C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	.008	.016	.031	.062	•125	-250	.500	1.00	2.00	
OCT 17. 1969	1305 18.0	17600	470	22300						11	65	94	100			AMC
NOV 22	1345 13.0	18200	477	23400	10	10		12		20	46	88	100			Abac
DEC 19	1440 12.0	19400	368	19300						6	37	80	100			VN
APR 23, 1970	1405 10.0	22000	882	52400	2	2		2		11	60	90	100			
SEP 10	1130 18.0	24100	21200	1380000	42	48	50	53	63	84	98	100				VPWC
SEP 10	1130 18.0	24100	21200	1380000	2	5	19	55	64	84	98	100				VPY

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

				NUMBER						PART	ICLE 2	1 Z E					
			TEM- PERA- TURE		DISCHARGE		PERCENT	FINE	R THAN	THE S	12E (1	N MILL	IMETER	S) 140	ICATED		COHTSM FO VJAPA
	DATE	TIME		POINTS		.062	.125	.250	.500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	\$15
NOV	22, 1969	1500	13.0			1	2	27	98	100							s
	16, 1970						1	15	92	99	100						S
JUN	1	0840	13.5					11	84	98	99	100					S
SEP	14	0910	16.0			1	3	16	80	98	99	100					Š

## 09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

			TEMPERATUR	IE (°C) DF	WATER, W	ATER YEAR	OCTOBER 1	969 TO SE	LIEWREK T	710		
DAY	00	CT	NO	v	DE	C	JA	N	FE	В	MA	IR.
	MAX	MIN	MAX	MIN	XAM	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2	18.5 18.5	18.5 18.5	15.0 15.0 15.0	15.0 15.0 15.0	12.0 11.5	11.5	9.5 9.5 9.5	9.5 9.5	8.5 8.5 8.5	8.5 8.5 8.5	9.5 9.5	9.5 9.0
3	18.5 17.5	17.5 16.5	15.0 15.0	15.0 14.5	12.0 12.0	11.5 12.0	9.5 9.0	9.0 9.0	8.5 9.0	8.5 8.5	9.5 9.5	9.5 9.5
5	16.5	16.0	15.0	15.0	12.0	12.0	9.0	8.5	9.0	9.0	9.5	9.5
6	16.0	15.5	15.0	15.0	12.0	11.5	9.0	8.5	9.0	9.0	10.0	9.5
7	15.5	15.5	15.0	14.5	11.5	11.5	9.0	9.0	9.0	9.0	10.0	10.0
8	16.5 17.0	15.5 16.5	14.5 14.5	14.5 14.5	11.5 11.5	11.5	9.0 9.0	9.0 9.0	9.0 9.0	9.0 9.0	10.5 10.5	10.0
1Ó	17.0	17.0	14.5	14.5	11.5	11.0	9.0	9.0	9.5	9.0	10.5	10.0
11	17.0	17.0	14.5	14.5	11.5	11.5	9.5	9.0	9.5	9.5	10.0 9.5	9.5
12 13	17.0 16.0	16.0 15.0	14.5 14.5	14.5 14.5	11.5 11.0	11.0 11.0	9.5 9.5	9.5	9.5	9.5	10.0	9.5
14 15	16.0 16.5	15.5 16.0	14.5 14.5	14.5 14.0	11.0 10.5	10.5 10.5	9.5 9.5	9.5 9.5	9.5 9.5	9.5 9.5	10.0 10.5	10.0
16 17	17.0 17.0	16.5 17.0	14.0 14.0	14.0 13.5	10.5 11.0	10.5 10.5	9.5	9.5	9.5	9.5 9.5	10.5 10.5	10.5 10.5
18	17.0	16.5	13.5	12.0	11.0	11.0	9.5	9.5	9.5	9.5	10.5	9.5
19 20	16.5 16.5	16.5 15.0	13.0 11.5	11.5 11.5	11.0 11.0	11.0 11.0	9.5 9.5	9.5 9.5	9.5 9.0	9.0 9.0	9.5 9.5	9.0 9.0
21	15.0	15.0	12.0	11.5	11.0	11.0	9.5	9.0	9.0	9.0	10.0	9.5
22	16.0	15.D	13.0	12.0	11.0	11.0	9.5	9.0	9.0	9.0	10.0	10.0
23 24	16.0 16.5	16.0 16.0	13.0 13.0	13.0 12.0	11.0 11.0	11.0 10.5	9.5 9.5	9.5 9.5	9.5 10.0	9.0 9.5	10.0 10.5	10.0 10.0
25	16.5	16.5	13.0	12.0	10.5	10.5	9.5	9.5	10.0	10.0	10.5	10.5
26	16.5	16.5	13.0	13.0	10.5	10.5	9.5	9.5	10.0	10.0	10.5 10.5	10.0 10.0
27 28	16.5 16.0	16.0 16.0	13.0 13.0	13.0 12.0	10.5 10.5	10.5 10.0	0.0 9.5	9.5	10.0 10.0	10.0 9.5	10.5	10.0
29	16.0	16.0	12.0	11.5	10.0	9.0	9.0	8.5			10.5 10.5	10.0 10.0
30 31	16.0 15.0	15.0 15.0	12.0	11.5	9.5 9.5	9.0 9.5	8.5 8.5	8.0 8.0			10.5	10.5
AVG	16.5	16.0	14.0	13.5	11.0	11.0	9.5	9.0	9.5	9.0	10.0	10.0
DAY		PR		AY	J	UN	Jı	<b>JL</b>	A	JG	s	EP
DAY	A MAX	PR MIN	M MAX	AY MIN	J XAM	UN MIN	JI Xah	JL MIN	A MAX	JG MIN	S Max	EP MIN
1	MAX 10.5	MIN 9.5	MAX 10.5	MIN 9.5	MAX 13.5	HIN	MAX	MIN	MAX 16.5	MIN	MAX	MIN
1 2	MAX 10.5 9.5	MIN 9.5 9.5	MAX 10.5 10.5	MIN 9.5 10.0	MAX 13.5 13.5	MIN 13.0 13.0	HAX 15.0 14.5	MIN 14.0 14.0	MAX 16.5 16.0	MIN 16.0 16.0	MAX 16.0 16.0	MIN 16.0 15.5
1 2 3	MAX 10.5 9.5 10.0 10.0	MIN 9.5 9.5 9.5 9.5	MAX 10.5 10.5 10.5 11.5	9.5 10.0 10.5 10.5	MAX 13.5 13.5 13.0	MIN 13.0 13.0 12.0	HAX 15.0 14.5 14.5	MIN 14.0 14.0 14.5	MAX 16.5 16.0 16.5	MIN 16.0 16.0 16.0	MAX 16.0 16.0 16.5	MIN 16.0 15.5
1 2 3	MAX 10.5 9.5 10.0	9.5 9.5 9.5	MAX 10.5 10.5 10.5	9.5 10.0 10.5	MAX 13.5 13.5	MIN 13.0 13.0	HAX 15.0 14.5	MIN 14.0 14.0	MAX 16.5 16.0	MIN 16.0 16.0	MAX 16.0 16.0	MIN 16.0
1 2 3 4 5	10.5 9.5 10.0 10.0 10.0	9.5 9.5 9.5 9.5 9.5 9.5	MAX 10.5 10.5 10.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5	HAX 13.5 13.5 13.0 13.0 12.0	MIN 13.0 13.0 12.0 12.0 12.0	15.0 14.5 14.5 14.5 14.5	MIN 14.0 14.0 14.5 14.0 14.5	MAX 16.5 16.0 16.5 16.5	MIN 16.0 16.0 16.5 16.0	16.0 16.0 16.5 16.5 16.0	MIN 16.0 15.5 16.0 15.5 15.5
1 2 3 4 5 6 7 8	10.5 9.5 10.0 10.0 10.0	9.5 9.5 9.5 9.5 9.5 9.5 10.0	MAX 10.5 10.5 10.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5	13.5 13.5 13.0 13.0 12.0	MIN 13.0 13.0 12.0 12.0 12.0	15.0 14.5 14.5 14.5 14.5	MIN 14.0 14.0 14.5 14.0 14.5	MAX 16.5 16.0 16.5 16.5 16.5	MIN 16.0 16.0 16.0 16.5 16.0 16.0	MAX 16.0 16.0 16.5 16.5 16.0	MIN 16.0 15.5 16.0 15.5 15.5
1 2 3 4 5 6 7 8	10.5 9.5 10.0 10.0 10.0 10.5 10.5	9.5 9.5 9.5 9.5 9.5 10.0 10.5 10.5	10.5 10.5 10.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5	13.5 13.5 13.0 13.0 12.0 12.0 12.0 13.5	13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 13.5	15.0 14.5 14.5 14.5 14.5 15.0 15.0	MIN 14.0 14.0 14.5 14.0 14.5 14.5 14.5	MAX 16.5 16.5 16.5 16.5 16.5 16.6 16.5	MIN 16.0 16.0 16.5 16.0 16.0 16.0	16.0 16.5 16.5 16.0 16.0 18.0 18.0	MIN 16.0 15.5 16.0 15.5 16.0 16.0 17.0
1 2 3 4 5 6 7 8 9	MAX 10.5 9.5 10.0 10.0 10.5 10.5 10.5	9.5 9.5 9.5 9.5 9.5 9.5 10.0 10.5 10.5	10.5 10.5 10.5 10.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5	13.5 13.5 13.0 13.0 12.0 12.0 12.0 13.5 13.5	13.0 13.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5	HAX 15.0 14.5 14.5 14.5 14.5 15.0 15.0 14.5 15.5	MIN 14.0 14.0 14.5 14.0 14.5 14.5 14.5 14.5	HAX 16.5 16.0 16.5 16.5 16.5 16.5 16.5	MIN 16.0 16.0 16.5 16.0 16.0 16.0 16.0	16.0 16.0 16.5 16.5 16.0 16.0 18.0 18.0	MIN 16.0 15.5 16.0 15.5 15.5 16.0 16.0 17.0 18.0
1 2 3 4 5 6 7 8 9	MAX 10.5 9.5 10.0 10.0 10.5 10.5 10.5	9.5 9.5 9.5 9.5 9.5 10.0 10.5 10.5	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5	MAX 13.5 13.5 13.0 12.0 12.0 12.0 13.5 13.5	MIN 13.0 13.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5	HAX 15.0 14.5 14.5 14.5 15.0 15.0 14.5 15.5	MIN 14.0 14.0 14.5 14.5 14.5 14.5 14.5 14.5	MAX 16.5 16.0 16.5 16.5 16.5 16.5 16.5 18.0	MIN  16.0 16.0 16.5 16.0 16.0 16.0 16.0 16.0 16.0 16.0	MAX 16.0 16.5 16.5 16.0 18.0 18.0 18.0	MIN 16.0 15.5 16.0 15.5 15.5 16.0 16.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10	MAX 10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5	9.5 9.5 9.5 9.5 9.5 10.0 10.5 10.5 10.5	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	13.5 13.5 13.0 13.0 12.0 12.0 12.0 13.5 13.5 13.5	13.0 13.0 12.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5	MAX 15.0 14.5 14.5 14.5 15.0 15.0 15.5 15.5	MIN 14.0 14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.0	MAX 16.5 16.0 16.5 16.5 16.5 16.5 16.5 18.0	MIN  16.0 16.0 16.5 16.0 16.0 16.0 16.0 16.0 16.5 17.0 16.5	16.0 16.0 16.5 16.5 16.0 18.0 18.0 18.0 18.0	MIN 16.0 15.5 16.0 15.5 16.0 16.0 17.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10	MAX 10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5	9.5 9.5 9.5 9.5 9.5 10.0 10.5 10.5 10.5 10.5	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	13.5 13.5 13.0 13.0 12.0 12.0 12.0 13.5 13.5 13.5	13.0 13.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5 13.5 13.0 13.0	HAX 15.0 14.5 14.5 14.5 15.0 15.0 15.5 15.5	MIN  14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.0 15.0	MAX 16.5 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	MIN  16.0  16.0  16.5  16.0  16.0  16.0  16.0  16.0  16.5  17.0  16.5	16.0 16.0 16.5 16.5 16.0 18.0 18.0 18.0 18.0 18.0	MIN 16.0 15.5 16.0 15.5 16.0 17.0 17.0 18.0
1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5	9.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.5	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 11.5 11.5 11.5 11.5 11.5 11	13.5 13.5 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.5	13.0 13.0 12.0 12.0 12.0 12.0 12.0 13.5 13.0 13.0 13.0	15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.5 15.5 15.5 16.5 16.5	HIN 14.0 14.0 14.5 14.0 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.0	16.5 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	16.0 16.0 16.0 16.5 16.0 16.0 16.0 16.5 17.0 16.5 16.5	16.0 16.0 16.5 16.5 16.0 18.0 18.0 18.0 19.0 17.0 16.5	MIN  16.0 15.5 16.0 15.5 15.5 17.0 17.0 17.0 17.0 18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.5 10.5	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.05 10.5 10.5 11.5 11.5 11.5 11.5 1	13.5 13.5 13.0 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.6 13.0 14.0	HIN 13.0 12.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5 13.0 13.0 13.0 13.0	15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.5 15.5 15.5 16.5 16.5	HIN 14.0 14.5 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.0 15.0 16.0	16.5 16.5 16.5 16.5 16.5 16.5 16.5 18.0 17.0 17.0 16.5 16.5	16.0 16.0 16.0 16.5 16.0 16.0 16.0 16.0 16.0 16.5 17.0 16.5 16.5	16.0 16.0 16.5 16.5 16.0 18.0 18.0 18.0 19.0 19.0 19.0 15.0 15.0 15.0	MIN  16.0 15.5 15.5 15.5 15.0 17.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 16.5
1 2 3 4 5 6 7 7 8 9 9 10 11 12 13 11 15 16 17 18	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.5 10.5 10.5	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.05 10.5 10.5 11.5 11.5 11.5 11.5 1	13.5 13.0 13.0 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.0 13.0 14.0 14.0	NIN 13.0 13.0 12.0 12.0 12.0 12.0 12.0 13.5 13.0 13.0 13.0 13.0 13.0 13.0	15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.5 15.5 15.5 16.5 16.5 16.0 16.0 15.5	HIN 14.0 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.0 15.0 15.5 16.0	MAX 16.5 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	16.0 16.0 16.0 16.5 16.0 16.0 16.0 16.0 16.5 17.0 16.5 16.5	16.0 16.0 16.5 16.5 16.0 18.0 18.0 18.0 19.0 19.0 19.0 15.0 15.0 15.0	MIN  16.0 15.5 16.0 15.5 16.0 17.0 18.0 17.0 18.0 15.5 16.5 16.5 15.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.5 10.5	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.05 10.5 10.5 11.5 11.5 11.5 11.5 1	13.5 13.5 13.0 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.6 13.0 14.0	HIN 13.0 12.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5 13.0 13.0 13.0 13.0	15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.5 15.5 15.5 16.5 16.5	HIN 14.0 14.5 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.0 15.0 16.0	16.5 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 18.0 17.0 17.0 17.0 16.5 16.5	16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	16.0 16.0 16.5 16.5 16.0 18.0 18.0 18.0 18.0 18.0	MIN  16.0 15.5 15.5 15.5 15.0 17.0 17.0 18.0 17.0 16.0 17.0 16.0 17.0 16.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.0 10.0	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	13.5 13.5 13.0 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.0 14.0 14.0 14.0	13.0 13.0 12.0 12.0 12.0 12.0 12.0 13.5 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0	15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.5 15.5 15.5 16.6 16.0 16.0 16.0 15.5	HIN 14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.5 16.0 15.5 15.0 15.5 15.0	HAX 16.5 16.0 16.5 16.5 16.5 16.5 16.6 18.0 17.0 17.0 16.5 16.5 17.0 17.0 17.0	MIN 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	16.0 16.0 16.5 16.5 16.0 18.0 18.0 19.0 17.0 16.5 16.5 15.5 15.5 15.5	MIN 16.00 15.5 16.00 15.5 16.0 17.0 17.0 18.0 16.0 16.5 16.5 16.5 15.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.5 10.0 10.0 10	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	13.5 13.5 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.6 14.0 14.0 14.0 14.0	HIN 13.0 13.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	HAX 15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.5 15.5 15.5 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	HIN 14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.5 16.0 15.5 15.5	MAX 16.5 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	MIN  16.0 16.0 16.0 16.5 16.0 16.0 16.0 16.0 16.0 16.0 16.5 17.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.0 16.0 16.0	16.0 16.0 16.5 16.5 16.0 18.0 18.0 19.0 17.0 16.5 16.5 15.5 15.5 15.5	MIN 16.00 15.5 16.00 15.5 16.0 17.0 17.0 18.0 16.0 16.5 16.5 16.5 15.5
1 2 3 4 4 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.0 10.0 10.0 10	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	13.5 13.5 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.6 14.0 14.0 14.0 14.0 14.0 14.0	HIN  13.0 12.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5 13.0 13.0 13.0 13.0 14.0 13.5 13.5 14.0 14.0 14.0 14.0	15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.5 15.5 15.5 16.5 16.0 16.0 16.0 15.5 15.5	HIN 14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.5 16.0 15.5 16.0 15.5 16.0	MAX 16.5 16.0 16.5 16.5 16.5 16.5 16.5 18.0 17.0 17.0 16.5 16.5 17.0 17.0 17.0 16.5 16.5	MIN 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	16.0 16.0 16.5 16.5 16.5 16.0 18.0 18.0 18.0 17.0 17.0 16.5 16.5 15.5 15.5 15.5 15.5 15.5 15.5	MIN 16.0 15.5 16.0 15.5 15.5 16.0 17.0 17.0 18.0 17.0 15.5 16.5 16.5 16.5 15.5 15.5 15.5 15.5
1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.0 10.0 10.0 10	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	13.5 13.5 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	HIN 13.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5 13.0 13.0 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.5 15.5 15.5 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	HIN  14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.5 16.0 15.5 16.0 16.0	HAX  16.5 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	MIN  16.0 16.0 16.0 16.5 16.0 16.0 16.0 16.0 16.0 16.5 17.0 16.5 16.5 16.5 16.0 16.5 16.0 16.0 16.0 16.5	16.0 16.0 16.5 16.5 16.5 16.0 18.0 18.0 18.0 17.0 17.0 16.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5	MIN 16.0 15.5 16.0 15.5 15.5 16.0 17.0 18.0 17.0 18.0 15.5 16.5 16.5 16.5 15.5 15.5 15.5 15.5
1 2 3 4 5 5 6 7 7 8 8 9 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 25 26	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.5 10.0 10.0 10	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	13.5 13.5 13.0 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	HIN 13.0 12.0 12.0 12.0 12.0 12.0 12.0 13.5 13.0 13.0 13.0 13.0 14.0 1	15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.5 15.5 15.5 16.5 16.5 16.5 16.5 16.5	HIN 14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.5 16.0 15.5 16.0 15.5 16.0 15.5	HAX  16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.	MIN 16.0 16.0 16.5 16.0 16.0 16.0 16.0 16.0 16.5 17.0 16.5 16.5 16.5 16.5 16.6 16.5 16.6 16.6	16.0 16.0 16.5 16.5 16.5 16.0 18.0 18.0 18.0 19.0 17.0 16.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5	MIN 16.0 15.5 16.0 15.5 15.5 16.0 17.0 17.0 17.0 18.0 17.5 16.0 15.5 16.0 15.5 16.0 15.5 16.0 15.5 16.0 17.0 16.0 17.0 18.0
1 2 3 4 5 5 6 7 7 8 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.0 9.5 9.5 9.5 9.5 9.5 9.5	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	HAX 13.5 13.0 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.5 13.6 14.0 14.0 14.0 14.0 14.0 14.0 14.5 14.5 14.5	HIN  13.0 13.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5 13.0 13.0 13.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	HAX  15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.5 15.5 15.5 15.5 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0	HIN 14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.5 16.0 15.5 16.0 16.0	HAX  16.5 16.0 16.5 16.5 16.5 16.5 16.5 18.0 17.0 17.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	MIN  16.0  16.0  16.0  16.0  16.0  16.0  16.0  16.0  16.0  16.5  17.0  16.5  16.5  16.5  16.5  16.5  16.5  16.5  16.5  16.5  16.5  16.5  16.5	MAX  16.0 16.0 16.0 16.5 16.5 16.0 18.0 18.0 18.0 18.0 17.0 16.0 16.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5	MIN 16.0 15.5 16.0 15.5 15.5 16.0 17.0 17.0 17.0 18.0 17.5 16.0 15.5 16.0 15.5 16.0 15.5 16.0 15.5 16.0 17.0 16.0 17.0 18.0
1 2 3 4 4 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 25 26 27 28 29	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.5 10.0 10.0 10	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	13.5 13.5 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.6 13.0 14.0 14.0 14.0 14.0 14.0 14.5 14.5 14.5	HIN  13.0 12.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5 13.0 13.0 13.0 14.0 14.0 14.0 14.5 14.5 14.5	HAX  15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.5 15.5 16.5 16.0 16.0 16.0 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5	HIN  14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.0 15.5 16.0 16.0 15.5 16.0 16.0 16.0	MAX  16.5 16.0 16.5 16.5 16.5 16.5 16.5 18.0 17.0 17.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	MIN  16.0 16.0 16.0 16.5 16.0 16.0 16.0 16.0 16.5 17.0 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	16.0 16.0 16.5 16.5 16.5 16.0 18.0 18.0 18.0 17.0 16.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5	MIN 16.0 15.5 16.0 15.5 15.5 16.0 17.0 18.0 17.0 18.0 15.5 16.5 16.5 16.5 15.5 15.5 15.5 15.5
1 2 3 4 5 5 6 7 7 8 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.0 9.5 9.5 9.5 9.5 9.5 9.5	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	HAX 13.5 13.0 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.5 13.6 14.0 14.0 14.0 14.0 14.0 14.0 14.5 14.5 14.5	HIN 13.0 12.0 12.0 12.0 12.0 12.0 12.0 13.5 13.0 13.0 13.0 13.0 14.0 1	15.0 14.5 14.5 14.5 15.0 15.0 15.5 15.5 15.5 16.5 16.5 16.5 16.5 16.5	HIN 14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.0 15.0 15.5 16.0 15.5 16.0 15.5 16.0 15.5	HAX  16.5 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 17.0 17.0 17.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	MIN  16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.	16.0 16.0 16.5 16.5 16.5 16.0 18.0 18.0 18.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	NIN 16.0 15.5 15.5 15.5 16.0 17.0 17.0 17.0 18.0 18.5 18.5 18.5 18.5 18.5 18.5 18.5 18.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 15 16 17 18 19 19 20 21 22 23 24 25 26 27 28 29 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	10.5 9.5 10.0 10.0 10.5 10.5 10.5 10.5 10.5 10	9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 10.5 10.0 10.0 10	10.5 10.5 10.5 11.5 11.5 11.5 11.5 11.5	9.5 10.0 10.5 10.5 11.5 11.5 11.5 11.5 11	13.5 13.5 13.0 12.0 12.0 12.0 13.5 13.5 13.5 13.6 13.0 14.0 14.0 14.0 14.0 14.0 14.5 14.5 14.5	HIN  13.0 12.0 12.0 12.0 12.0 12.0 12.0 13.5 13.5 13.0 13.0 13.0 14.0 14.0 14.0 14.5 14.5 14.5	15.0 14.5 14.5 14.5 14.5 15.0 15.0 15.5 15.5 15.5 16.6 16.0 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	HIN 14.0 14.0 14.5 14.5 14.5 14.5 15.0 15.0 15.5 16.0 15.5 16.0 15.5 16.0 16.0 16.0 16.0	HAX  16.5 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 17.0 17.0 17.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	MIN  16.0 16.0 16.0 16.5 16.0 16.0 16.0 16.5 17.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	16.0 16.0 16.5 16.5 16.5 16.0 18.0 18.0 18.0 17.0 16.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5	MIN 16.0 15.5 16.0 15.5 15.5 16.0 17.0 18.0 17.0 18.0 15.5 16.5 16.5 16.5 15.5 15.5 15.5 15.5

## 09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.--Continued

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAY DISCHARGE (CFS)	MFAY CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)
ı	13800	338	12600	14500	450	17600	7500	125	2530
2	9500	115	2950	13600	290	10600	15300	375	15500
3	8880	312	7480	7740	250	5220	16200	455	19900
4	7700	249	5180	12700	359	12300	17400	715	33600
5	5250	77	1090	12900	235	8190	17600	720	34200
6	4180	25	282	12800	170	5880	17500	560	26500
7	5660	112	1710	14000	398	16800	16200	452	20700
8	10300	396	11003	13900	270	10100	10000	110	2970
9	12200	459	15100	12600	250	8510	16500	500	22300
10	12400	362	12100	7640	100	2120	16400	400	17700
11	11730	346	10900	13600	300	11000	16800	300	13600
12	12100	349	11400	13100	250	8840	16100	300	13000
13	7800	78	1640	13200	250	8910	15000	263	10700
14	15600	234	7960	14100	250	9520	12100	220	7190
15	12400	243	8140	14100	249	9480	8080	65	1420
16	12300	243	7870	12500	167	6310	1 3600	243	8920
17	13200	284	10100	7730	155	3240	13600	221	8230
18	13300	352	12600	13600	50B	21300	14600	243	946C
19	11303	185	5490	14600	715	28200	14900	243	9660
20	7570	98	2000	16400	940	43100	15000	225	9110
21	11500	227	7050	16000	565	24400	12600	120	4080
22	14600	1750	69000	14600	253	9970	8290	65	1450
23	12600	2790	94900	11700	240	7580	13600	320	11800
24	11400	1640	50500	8080	245	5340	15000	343	13800
25	11000	3230	95900	13400	380	13700	12100	134	4380
26	10690	6670	191000	15000	370	15000	5830	36	567
27	7520	3760	76300	12700	195	6690	10300	114	3170
28	11100	2800	83900	717)	40	774	12600	125	¥250
29	11530	1400	43500	12600	280	9530	8430	61	1390
30	12800	800	27600	11700	260	8210	14100	244	10300
31	15600	510	21500				15900	405	17900
TOTAL	333760		908742	378460		348414	419330		360277

		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)
1	16400	391	16900	9175	59	1460	7380	240	4780
2	9270	94	2340	5090	16	220	7090	250	4790
3	16100	340	15700	10900	100	2940	7750	3165	72900
5	16800 10400	398 54	18800	11000	115	3420	5730	1600	24800
,	10400	24	1520	10600	62	1770	4790	810	10500
6	16200	329	15700	11700	128	4040	5340	378	5450
7	15900	333	14300	10900	93	2740	5240	275	3890
8	17200	439	20400	9330	88	2220	4880	184	2420
9	16500	390	17400	408C	11	121	4630	104	1300
10	17200	444	21500	9220	70	1740	8210	179	3970
11	13500	207	7550	11100	156	4680	10600	379	12400
12	7880	53	1130	13400	335	13900	10100	135	3680
13	15100	232	9460	14500	450	17600	9780	81	2140
14	13200	200	7130	10100	358	9760	9140	72	1780
15	13600	200	7340	10200	140	3860	6820	25	479
16	14800	444	18700	4730	45	575	6120	30	496
17	15300	300	12400	9110	103	2530	8470	36	823
18	14200	240	9200	9260	58	1450	10100	91	2480
19	11100	75	2250	8700	30	705	10700	99	2860
50	14100	170	6470	8880	23	551	10800	100	2920
21	12700	140	4800	8650	24	561	9430	73	1860
22	11500	76	2360	6670	22	396	8720	184	5240
23	8680	55	1290	4410	18	214	8290	453	10100
24	8410	40	908	5110	32	442	10300	473	13100
25	5300	7	100	9140	34	839	9780	389	1030D
26	3380	6	55	7670	30	621	9500	293	7520
27	8100	68	1490	7750	26	544	9320	197	4960
28	10300	144	4000	7540	16	326	11400	375	11500
29	11200	99	2990				B580	1330	30800
30	11500	116	3600				8150	560	12300
31	11300	110	3360				9890	450	12000
TOTAL	387070		251143	248910		80225	257030		284538

## 09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ. -- Continued

		APRIL			MAY			JUNE	
DAY	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRAFION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEY- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	11200	270	8160	17800	310	14900	9410	43	1090
2	13300	1090	43500	16400	300	13300	11300	95	2900
3	15000	750	30400	13100	210	7430	16200	899	44800
4	16300	680	29900	11600	129	4040	13800	215	8010
5	16800	320	14500	15700	262	1110D	15800	230	9810
6	15400	250	10400	14400	220	855D	15100	243	978D
7	17100	400	18500	15500	300	12600	11800	139	4430
8	16100	400	17400	14800	305	12200	9570	90	2330
9	15600	500	21100	14800	178	7110	12400	155	5190
10	17000	500	23000	13200	237	9190	12500	361	12900
11	16300	400	17600	11309	83	2440	14000	755	26400
12	17400	300	14100	14900	209	9340	13200	200	7130
13	14000	250	9450	15300	218	9010	15600	273	114D0
14	15200	350	14400	15800	229	9770	12400	105	352D
15	16800	500	22700	16500	288	12800	9590	60	1550
16	17000	320	14700	17100	492	24900	12200	120	3950
17	19300	560	28700	15800	260	11100	13400	100	3670
18	17500	430	20300	14500	171	7940	15200	130	534D
19	14400	210	8160	17200	286	14500	15700	165	6990
20	11700	190	600D	17000	311	16100	16000	190	8210
21	14800	270	10800	18400	426	23800	14400	185	7190
22	13800	150	5590	17900	360	19300	12600	100	3400
23	17300	530	24800	18100	449	24300	17200	275	12800
24	19800	710	38000	15900	223	9570	15400	160	6650
25	20600	700	38900	15500	155	6490	14700	140	5560
26	17300	390	18200	18400	477	56500	16600	210	9410
27	16800	260	11800	17100	353	18400	15900	195	8370
28	18200	230	11300	14600	154	6070	15200	173	6980
29	19000	470	24100	16000	215	9293	11800	113	3500
30	17700	390	18600	12600	100	3400	14900	250	10100
31				9780	59	1560			
TOTAL	488400		575060	476980		366700	413870		253310

		JULY			AUGUST			SEPTEMBER	
OAY	MEAN Discharge (CFS)	MEAN CONCEN- Tration (MG/L)	SEDIMENT OISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (M3/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	13800	155	5780	14909	290	11700	14900	650	26100
2	13000	112	3860	13200	213	7590	14500	600	23500
3	18000	420	20400	9643	180	4690	15100	400	16300
4	18900	36C	18400	13000	250	8780	13400	360	13000
5	14900	130	5230	12800	2100	72600	1150C	350	10900
6	13500	100	3650	12500	2000	67500	8260	7480	167000
7	16900	310	14100	12436	2000	67000	12100	47190	1460000
8	13300	205	7360	15000	3000	127000	10100	28200	769000
9	13400	110	3980	12800	2000	69100	14500	15800	619000
10	13600	255	9360	8990	500	12000	17900	18800	909000
11	11500	200	6210	12000	3000	97200	17500	20400	964000
12	10900	165	4860	13100	2000	70700	15200	4100	168000
13	8560	620	14300	11600	1000	31300	10700	1200	34700
14	11800	530	16900	11500	1000	31100	7500	933	18800
15	13500	240	8750	12000	525	1 700D	12100	2310	75500
16	15800	220	9390	8650	450	10500	10800	1950	56900
17	16600	275	12300	6940	430	8060	11100	1850	55400
18	17000	515	23600	10400	450	13100	10900	1300	38300
19	16700	230	10100	12800	10300	421000	11900	1380	44300
20	12300	63	2090	14500	12700	497000	12100	1400	45700
21	11000	62	1840	15300	9300	384000	9600	1050	27200
22	11600	195	6110	14900	6450	259000	12400	1290	43200
23	11300	869	30500	12900	5250	183000	12600	875	29800
24	12500	1200	42600	8470	4600	105000	14200	1200	46000
25	11900	642	21000	16100	4500	196000	14300	1100	42500
26	10700	197	5550	18100	1100	53800	14200	860	33000
27	916C	70	1730	19100	1350	69600	13900	550	20600
28	11500	440	13700	17500	800	37800	8400	223	4990
29	11900	550	17700	14700	500	19800	13600	630	23100
30	11600	210	6580	15100	450	18300	15900	950	40800
31	14000	769	33600	11000	280	8320			
TOTAL	410620		381530	402190		2974540	381160		5826590
	DISCHARGE F								4597780
TOTAL	SUSPENDEO-S	EDIMENT DI	SCHARGE FOR YEA	R (TDNS)					12611069

### BRIGHT ANGEL CREEK BASIN

## 09403000 BRIGHT ANGEL CREEK NEAR GRAND CANYON, ARIZ.

LOCATION. --Lat 36°06'11", long 112°05'44", in sec.5, T.31 N., R.3 E. (unsurveyed), Coconino County, at gaging station in Grand Canyon National Park, 0.4 mile upstream from mouth and 4 miles northeast of village of Grand Canyon.

DRAINAGE AREA, -- 101 sq mi.

PERIOD OF RECORD. --Chemical analyses: October 1952 to September 1970. Sediment records: November 1966 (partial records).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	тіме	DIS- CHARGE (CFS)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.								
13 NOV.	1420	22	221	0	2.3	349	7.6	13.0
16	1030	45	170	0	3.4	297	7.8	10.0
DEC.								
28	1405	22	227	0	2.5	354	7.9	4.0
JAN.				0	3.0	354	8.1	6.0
11 FEB.	1100	20	220	U	3.0	334	0.1	0.0
12	1050	20	221	0	2.4	341	7.9	9.0
MAR.								
18	1120	22	224	0	3.4	361	7.9	6.0
APR.		28	174	2	1.7	278	8.3	10.5
16 May	1220	28	1/4	Z	1./	2/8	0.3	10.5
09	1440	74	135	6	1.0	264	8.5	17.0
JULY							_	
17	1115	17	181	2	2.6	299	8.3	22.0
AUG.				4		284	8.5	25.0
15 SEP.	1240	18	174	4	1.4	284	0.3	23.0
18	1005	16	198	4	3.2	320	8.4	14.6

### 189 KANAB CREEK BASIN

## 09403780 KANAB CREEK NEAR FREDONIA, ARIZ.

LOCATION.—Lat 36°51'50", long 112°34'45", in SE<sup>1</sup>4 sec.14, T.40 N., R.3 W. (unsurveyed), Coconino County, in Kaibab Indian Reservation, at gaging station at Nagles Crossing, 0.2 mile downstream from Johnson Wash and 6.5 miles southwest of Fredonia.

DRAINAGE AREA, -- 1,085 sq mi.

PERIOD OF RECORD. -- Specific conductance: October 1967 to September 1970. Water temperatures: October 1967 to September 1970. Sediment records: October 1963 to September 1970.

EMBES. --1909-70: Specific conductance: Maximum daily, 5,000 micromhos Feb. 3; minimum daily, 1,000 micromhos Mar. 4. Water temperatures: Maximum, 16.0°C Aug. 21; minimum, freezing point Feb. 3. Sediment concentrations: Maximum daily, 185,000 mg/l Aug. 22; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 551,000 tons Aug. 18; minimum daily, 0 ton on many days.

Period of record:
Specific conductance: Maximum daily, 7,000 micromhos Apr. 16, 17, 23, 24, 1968; minimum daily, 550 micromhos Feb. 15, 1968.
Water temperatures: Maximum, 28,0°C June 8, 1968; minimum, freezing point on many days during winter periods. Sediment concentrations: Maximum daily, 230,000 mg/l July 28, 1968; minimum daily, no flow on many days each

year. Sediment discharge: Maximum daily, 551,000 tons Aug. 18, 1970; minimum daily, 0 ton on many days each year.

REMARKS .-- No flow for many days each month.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

	TORCE-DATE: MEASUREMENT)											
DAY	DCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			~-			2700						
2						2000	3000					
3					5000	2000	3000					
4					2500	1000						
5						1700						
6					2500	1900						
7						2200						
8						2200						
9						200Ó						
10						2000						
11						2000						
12					~~	1800	~-			~-		
13						1800						
14		~-				1900						
15						2000						
16		1400				2200						
17		1850		2500		2500						
18		1400		2500								
19		1400		2100								
20				2300							1680	
21				2500							1710	
22					1900						1230	
23				-~	2800						2000	
24				2400	2500							
25				1900								
26				1880								1_
27												
28				1950						~-		
29								-	~-			
30				~-	-							
31												
AVG												

## KANAB CREEK BASIN

## 09403780 KANAB CREEK NEAR FREDONIA, ARIZ. -- Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	MAL	FEB	HAR	APR	MAY	JUN	JUL	AUG	SEP
1						6.0						
2						7.0	10.0					
3					0.0	7.0	10.0					
4					4.0	6.0						
5						8.0						
6					9.0	7.0						
7						6.0						
8						6.0						
9						3.0						
10						5.0						
11						4.0						
12						8.0						
13						2.0						
14						2.0						
15						3.0						
16		15.0				4.0						
17				3.0		7.0						
18		12.0		11.0								
19		12.0		4.0								
20				4-0							12.0	
21				6.0							16.0	
22					4.0						13.5	
23					1.0							
24				6.0	7.0							
25				4.0								
26				3.5								
27												
28				6.0								
29												
30												
31												
AVG												

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT OISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEY- Tration (MG/L)	SEDIMENT DISCHARGE (TOMS/DAY)
1	0		0	0		0	0		0
2 3									
3									
5									
,									
6				0		0			
7				.10	1760	1.0			
8				0.10	1,00	<b>1</b> .0			
9									
10									
11									
ĬŽ									
13							0		0
14							.10	521 <b>3440</b>	. 96
15				0		0	.60	3440	17
16				1.2	13800	34	.40	5000	5.4
17				2.6	13900	113	-10	3000	.81
18				.50	600D	8.1	.10	2000	.54
19				•10	3000	.81	.30	4D00	3.2
20				0		0	•20	3000	1.6
21	0		0				1.0	7000	19
22	.60	1130	2.9 •38				•50	4003	5.4
23	-20	700	. 38				.10	1000	•27
24	-10	500	-14				0		0
25	0		0						
26									
27									
28									
29 30									
31	0			0		. D			
31	U		U				v		U
TOTAL	.90		3.42	4.50		156.91	3.40		54.18

## 09403780 KANAB CREEK NEAR FREDONIA, ARIZ .-- Continued

## SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

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		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- Tration (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEY- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0		D	0		0	1.8	6570	50
5				0		0	51	15900	902
3				.80	683	1.8	15	14500	587
4				1.3	850	3.0	8.D	55100	1190
5	ð		0	1.7	910	4.2	5.0	39100	528
6	1.6	3000	13	-60	560	.91	2.5	5800	39
7	4.6	5000	62	0		0	2.3	5900	37
8	3.6	4000	39				3.3	3300	29
9	2.5	3000	20				3.6	3000	29
10	5.0	2000	11				3.6	5900	28
11	3.0	3000	24				6.2	3900	65
12	1.5	2000	8-1				4.6	8100	101
13	1.5	2000	8.1	0		0	5.0	3550	48
14	. 50	1000	1.4	.50	750	1.4	2.0	1650	8.9
15	-10	1000	.27	.70	750	1.4	1.0	1500	4.1
16	•10	1000	.27	.20	300	.16	-50	1100	1.5
17	8.7	3320	101	0		0	-30	300	.24
18	2.1	3880	27				-10	200	. 05
19	-80	1400	1.8				0		0
20	1.0	2140	9.8						
21	•10	1000	.27	0		0			
22	0		0	.40	1060	3.7			
23	0		0	2.5	2690	18	0		0
24	3.3	43700	456	.50	630	.85	.20	300	.16
25	9.0	41300	1000	-10	140	•04	0		0
26	5.4	13500	197	٥		0			
27	.50	8400	11	.70	9.7	4.7			
28	.10	4000	1.1	-20	1700	.92			
29	0		0						
30							0		0 _,
31	0		0				.40	83	. 34
TOTAL	52.00		1992.11	10.20		41.08	86.40		3648.29

		APRIL			MAY			JUNE	
DAY	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEOIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEGIMENT DISCHARGE (TDNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEY- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1.0	244	1.0	0		0	0		0
2	.80	400	.86						
4	•60 •20	495 210	.80 .11						
•	2.20	210	0.11						
•	•		· ·						
6									
7									
8									
. 9									
10									
11									
īž									
13	0		0						
14	.10	33	.11						
15	.20	108	.08						
	_		_						
16 17	0		_0						
18									
19									
20									
•-									
21	0		0						
22	.10	238	.08						
23	9		0						
24									
25									
26									
27	0		0						
28	.30	183	.18						••
29	0		0,10						
30	9		Ö				0		0
31				0		0			
TOTAL	3.30		3.22	0		0	0		0

### KANAB CREEK BASIN

## 09403780 KANAB CREEK NEAR FREDONIA, ARIZ. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

JULY AUGUST SEPTEMBER MEAN CONCEN-TRATION (MG/L) MEAN CONCEN-TRATION MEAN CONCEY-TRATION SEDIMENT DISCHARGE (TONS/DAY) MEAN DISCHARGE (CFS) SEDIMENT DISCHARGE (TONS/DAY) MEAM DISCHARGE (CFS) MEAN DISCHARGE (CFS) SEDIMENT DISCHARGE DAY (TONS/DAY) 0 ... 29100 ---0 ٥ 0 0 2345 ---59000 0 9.0 1.0 0 496 27 180 20400 10000 97 57000 18400 6 7 8 9 26 2360 1250 800 500 1430 271 2.0 6.5 1.4 76 40 10 5.0 2.0 56300 26500 10000 5000 ----13000 ------.60 3.0 1.0 2860 270 68 16 9.2 86 30D0 --0 25 3.0 .50 1.0 0 --0 4.0 2.0 1.0 .50 2000 750 420 430 350 4.1 --0 1500 6970 419 18 60400 **51700** •58 •19 13000 0 210 50 20 441 38 359 52000 20400 130000 154000 137000 7020 1100 551000 26300 152000 16 17 18 19 100 . 03 --67 68 5.0 1.0 --144000 165000 144000 52000 26900 31100 1940 140 21 22 23 24 25 ----26 27 28 29 30 31 === ٥ 0 ---3370 182 0 16000 33700 1.2 ō ٥ a a TOTAL 47.60 394.90 1471.2 894670.1 38,50 7930 TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHENICALLY DISPERSED: N, IN NATIVE WATER; P, PIPET 5, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

1718.00 908894.21

				WATER	l							PART	ICLE S	SIZE					
				TEM- PERA-			SUSPENDED SEDIMENT DISCHARGE	PERC	ENT F	INER	THAN '	THE S	12E (1	EN MI	LLIME	rers)	INDI	CATED	METHOO OF AMALY-
	DAT	E	TIME	(°C)	(CFS)	(MG/L)	(TOVS/DAY)	.002	.004	.D08	.016	.031	•062	.125	.250	-500	1.00	2.00	\$15
LAM	24.	1070	0630	04.0	A-1	53100	602	56	75		93		97	99	100				VPHC

## 09406000 VIRGIN RIVER AT VIRGIN, UTAH

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LOCATION.--Lat 37°11'54", long 113°12'25", in SENWINE sec.28, T.41 S., R.12 W., Washington County, at gaging station 1.1 miles west of Virgin and 2.3 miles downstream from North Creek.

DRAINAGE AREA. -- 934 sq mi.

PERIOD OF RECORD, --Chemical analyses: October 1950 to September 1958. Water temperatures: October 1950 to September 1956, May 1962 to September 1970. Sediment records: May 1962 to September 1970.

EXTREMES . -- 1969-70:

Sediment concentrations: Maximum daily, 120,000 mg/l Aug. 6; minimum daily, 39 mg/l May 30. Sediment discharge: Maximum daily, 251,000 tons Aug. 5; minimum daily, 8.5 tons June 3.

Period of record:
Sediment concentrations: Maximum daily, 150,000 mg/l Sept. 5, 1965; minimum daily, 19 mg/l July 11, 1969,
Sediment discharge: Maximum daily, 1,300,000 tons Dec. 6, 1966; minimum daily, 4,6 tons July 11, 1969.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					(DNCE-DA	AILY MEAS	JREMENT)					
DAY	96.1	VOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SFP
1		11.0	7.0			9.0				20.0		27.0
ž				0.0			12.0	18.0	26.0	24.5		17.5
3	16.0		8.0	0.0	5.0				26.5	24.0	25.5	
4	14.0			0.0		5.0	13.0	15.0		26.0	23.5	
5	13.0								19.0	26.0		18.0
6	18.0				10.0	9.5		12.0		18.0	18.0	
7			8.5				13.7		25.3	27.0	26.0	
8	17.0	11.0		5.0		10.0			17.5	21.5	30.0	16.0
9		11.0	7.3		9.0			11.5		22.0		
10		12.5			8.0				19.0		25.5	26.0
11		13.5	6.0			9.0	17.0	11.0	17.5	26.0		
12	14.0			6.0	12.0		16.0	17.5	18.0	29.0		25.5
13					10.0		14.0	13.5		19.0		
14		11.0				12.0			20.0	20.0		15.0
15		9.5	6.5	10.7	11.0		13.0		13.0	24.0	21.5	
16		10.0				5.0		20.0	24.0		20.5	17.5
17	15.2							12.0	21.5	26.5		
18	12.0	8.0	10.0	8.0					26.5	26.0	23.5	
19					9.0			19.0				24.0
50	13.0					19.0	13.0	20.5	24.5	27.5		
21			9.0	8.0				23.0	27.5	19.0		26.0
22	15.7				8.0	14.0	7.5	21.0	18.0	26.0	15.0	
23					9.0		12.0	24.5	28.0		21.5	21.0
24	15.0	8.0						16.0	21.0	19.0		
25	11.0	8.0		8.0				18.5		25.5	20.5	
26	17.0	17.d		9.0	10.0	11.0	17.0	21.5	29.0		20.0	21.0
27	14.0		5.5	10.0				20.3	21.0	19.0	24.0	
23	14.0					8.0	10.0	24.5			20.0	
29		7.0	2.7	5.0					24.5	24.5		24.0
30		9.0				8.0	18.0		26.0		26.5	
31	13.0		0.0	8.0						28.5		

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CCNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/OAY)	MFAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TOUS/DAY)
1	82	1000	221	144	999	386	150	812	379
	86	720	167	141	856	326	151	949	327
2 3 4	90	518	126	139	734	275	156	111.	468
4	92	518	129	135	600	219	161	1620	443
5	101	518	141	136	600	223	158	935	400
6	105	916	260	132	600	214	149	862	347
7	101	748	204	187	1100	555	152	792	325
8	101	611	167	174	1600	752	156	394	166
9	101	666	182	163	946	416	163	196	R6
10	101	725	198	167	650	293	156	433	182
11	105	790	224	165	242	168	147	957	380
12	108	861	251	155	502	210	152	713	?93
13	100	832	225	152	1040	427	146	531	209
14	103	804	224	148	2160	863	148	396	158
15	105	777	220	152	2060	845	148	295	118
16	108	751	219	259	4370	3067	148	408	163
17	110	751	223	342	3500	3230	153	564	233
18	120	751	243	257	1300	962	153	779	322
19	140	740	280	152	1090	447	152	718	295
20	135	729	266	168	915	415	151	661	269
21	140	730	276	175	768	363	150	629	247
22	162	1850	809	171	645	298	155	512	214
23	154	1550	644	164	541	247	154	43	179
24	149	1130	455	159	454	195	149	361	145
25	141	700	266	156	223	94	148	303	121
26	144	413	161	157	233	99	151	255	1/24
27	138	900	335	152	243	100	151	214	P.7
28	136	900	330	145	253	99	130	2 3 1	81
29	139	708	266	143	264	102	118	243	79
30	140	558	211	142	200	77	121	322	105
31	145	439	172	-11	~-		122	416	137
TOTAL	3682		8095	5032		15832	4599		7^72

## 09406000 VIRGIN RIVER AT VIRGIN, UTAH--Continued

			ED-SEDIMENT DIS	CHARGE, WATER		BEK 1969 IU 2EI	TEMBER 1970		
		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MFAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CPNCEY- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	124 116 102 108 110	350 328 357 318 283	117 103 98 93 84	132 127 124 137 134	300 272 247 223 201	107 93 63 82 73	312 480 417 405 403	6600 10400 6100 1040 869	5730 13500 6850 1140 946
6 7 9 10	102 114 116 130 144	252 225 200 269 362	69 69 63 94 141	132 133 133 128 128	181 230 292 406 192	65 83 105 140 66	271 156 157 149 156	726 575 455 469 483	531 242 193 187 203
11 12 13 14 15	143 140 138 133 155	487 655 655 654 654	188 248 244 235 274	135 149 144 134 127	242 305 403 442 484	88 123 157 160 166	151 138 134 143 151	497 492 488 483 530	2°3 183 177 156 216
16 17 18 19 20	150 186 163 144 142	600 800 590 661 740	243 402 260 257 284	121 121 117 118 114	399 329 271 223 200	13° 107 86 71 62	143 146 134 122 126	581 478 393 323 266	224 188 142 106 90
21 22 23 24 25	143 137 147 150 145	829 765 706 651 601	32 C 28 3 28 0 26 4 23 5	125 191 165 135 129	200 2500 1500 814 442	68 1290 668 297 154	125 120 124 124 136	273 323 321 332 337	99 105 116 111 124
26 27 28 29 30 31	137 136 137 124 119 131	601 297 137 219 351	222 221 106 46 70 124	129 131 130 	240 310 400	84 110 140	131 127 119 124 129 120	342 293 251 195 151 153	121 100 81 65 53 49
TOTAL	4166		5737	3723		4858	5671		32255
TOTAL	4166	APRIL	5737	3723	MAY	4858	5671	JUNE	32755
TOTAL	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT CISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TOMS/DAY)
	MEAN DISCHARGE	APRIL MEAN CONCEN- TRATION	SEDIMENT DISCHARGE	MEAN D1SCHAAGE	MAY MEAN CONCEN- TRATION	SEDIMENT CISCHARGE	MEAN DISCHARGL	JUNE MEAN CONCENT TRATICM	SEDIMENT DISCHARGE
DAY 1 2 3 4	MEAN DISCHARGE (CFS) 111 109 116 114	APRIL  MEAN CONCEN- TRATION (MG/L)  150 181 176 172	SEDIMENT DISCHARGE (TONS/DAY) 45 53 55 53	MEAN DISCHAAGE (CFS) 116 119 139 167	MAY MEAN CONCEN- TRATION (MG/L) 250 356 167 78	SEDIMENT CISCHARGE (TCNS/DAY) 78 114 63 35	MEAN DISCHARGE (LFS) 79 78 79 76	JUNE MEAN CONCENT TRATICH (MG/L) 150 265 41. 91	SEDIMENT DISCHARGE (TONS/DAY) 32 56 8+5 19
DAY 1 2 3 4 5 6 7 8 9	MEAN DISCHARGE (CFS) 111 109 116 114 116 126 148 143 138	APRIL MEAN CONCEN- TRATION (MG/L) 150 181 176 172 248 358 516 587 668	SEDIMENT DISCHARGE (TONS/DAY) 45 53 55 53 78 122 206 227 249	MEAN D1SCHAAGE (CFS) 116 119 139 167 182 205 177 191	MAY  MEAN CONCEN- TRATION (MG/L)  250 356 167 78 242 750 2100 1600 2100	SEDIMENT LISCHARGE (TONS/DAY) 78 114 63 35 119 369 1160 860 1086	MEAN DISCHARGE (LFS) 79 78 79 76 89 147 89 91	JUNE  MEAN CONCEN- TRATICN (MG/L)  151 265 40, 91 2C5 200, 367) 2200 2400	SECTIMENT DISCHARGE (TOMS/DAY)  32 56 8,5 19 44 51 1460 529 596
DAY  1 2 3 4 5 5 6 7 8 9 10 11 12 13 14	MEAN DISCMARGE (CFS) 211 109 116 114 116 126 143 138 151 166 143 119	APRIL MEAN CONCENTATION (MG/L) 150 181 176 172 248 356 516 587 668 761 866 344 191	SEDIMENT DISCHARGE (TONS/DAY) 45 53 55 53 78 122 206 227 249 310 388 133 61 43	MEAN DISCHARGE (CFS) 116 119 139 167 182 22 205 177 191 209 238 198 178 199	MAY MEAN CONCENTRATION (MG/L) 250 356 167 78 242 750 2100 2200 2200 2400 2100 2400 1050	SEDIMENT CISCHARGE (TONS/DAY)  78 114 63 35 119 369 1160 860 1080 1355 1350 411 615 539	MEAN DISCHARGE (LES) 79 78 79 76 95 147 89 91 98 103 89 86	JUNE  MEAN CONCENT TRATICH (MG/L)  150 265 41 205 207 2007 2007 2007 2007 2007 2007 2	SEDIMENT DISCHARGE (TPMS/DZY) 32 56 8.5 19 44 51 1460 529 590 701 467 237 188 158
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	MEAN DISCMARGE (CFS)  211 109 116 114 116 126 148 149 151 166 143 119 120 107	APRIL MEAN MEAN MEAN MEATION MEGATION MEGATION 181 176 172 248 358 516 587 668 761 191 133 92 74 74 77	SEDIMENT DISCHARGE (TONS/DAY)  45 53 55 53 78  122 206 227 249 310 388 103 388 123 61 43 27 20 16 13	MEAN DISCHARGE (CFS) 116 119 139 167 182 205 177 191 209 238 178 179 179 190 179 196 181 157	MAY MEAN CONCENTRATION (MG/L) 250 356 167 78 2402 756 2100 2100 2100 2400 2100 2100 2500 2500 2500	SEDIMENT CISCHARGE (TONS/DAY)  78 114 63 35 119 369 160 600 1357 1350 411 411 363 1360 606 251	MEAN DISCHARGE (LES) 79 78 79 76 99 91 103 98 103 79 89 86 83 79 75 76 74	JUNE  MEAN CONCENTRATION (MG/L)  157 265 40, 91 205 20, 367, 3220 2403 2403 2403 2403 2403 366 894 894 894 893 406 00337	SEDIMENT DISCHARGE (TPMS/DAY)  32  56  8.5  19  44  51  1460 529  701  467 237 188 188 182 192 69
DAY  1 2 3 4 5 6 7 7 8 9 10 11 12 13 114 15 16 17 18 12 20 21 22 23 24	MEAN DISCHARGE (GFS) 111 109 116 114 116 126 148 143 138 151 166 143 119 127 107 107 107 107 107 107 107 107 107 10	APRIL MEAN MEAN GENCEN- TRATION (MG/L) 150 181 176 172 248 358 516 587 668 344 191 133 92 74 67 75 96 75 59 48 81	SEDIMENT DISCHARGE (TONS/DAY)  45 53 55 53 78 122 206 227 249 310 388 133 61 43 27 20 16 13 19 27 20 16 13 19 27	MEAN DISCHARGE (CFS)  116 119 139 167 182 205 107 191 209 238 178 190 179 192 196 181 157 136 119 106 106 106	MAY MEAN MENCHOEN- TRATION IMG/LI 250 356 167 78 242 750 2100 2100 2100 2100 2400 2100 256 700 200 200 200 200 200 200 200 200 200	SEDIMENT CISCHARGE (TONS/DAY)  78 114 63 35 119 369 1160 860 1850 1350 1350 411 615 539 414 363 1360 606 2051 122 94 71 74 174	MEAN DISCHARGE (LFS) 79 78 79 76 99 91 103 98 89 86 83 79 75 76 74 74 84 83 83 81 81	JUNE MEAN CONCENTRATION (MG/L) 157 265 44, 91 2C5 220, 3677; 2200 2405; 4084 781 687, 894 410 317 340 384 771 759 391	SEDIWENT DISCHARGE (TPMS/DZY) 32 56 8.5 19 44 51 1460 529 590 701 467 237 138 158 158 158 172 69 77 175 170 88 94

## 09406000 VIRGIN RIVER AT VIRGIN, UTAH -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JULY			AUGUST			SEPTEMI CR	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SFOIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TUNS/DAY
1	94	2500	635	82	3500	775	73	252 1	497
2	94	2500	635	89	3800	913	85	2^5	470
3	94	2500	635	102	4120	1130	87	5000	470
4	119	6600	2120	236	38200	155000	100	2000	54.)
5	124	1860	603	950	98000	251000	840	32000	72600
6	131	3000	1060	520	120000	168000	350	130CC	12300
7	109	2600	765	243	55000	35600	150	6440	2616
8	165	14700	6510	112	4790	1450	100	3190	961
9	307	12000	11800	119	4500	1450	82	235^	52^
10	351	6930	6570	113	4230	1290	79	1730	369
11	630	400C	6800	108	6020	1760	75	1440	292
12	100	752	203	106	7036	2010	79	1200	256
13	79	756	161	125	8200	2770	172	11060	5110
14	77	700	146	127	9570	3280	8.3	7000	157C
15	77	539	112	176	20000	9500	77	290	6.3
16	89	2540	610	450	33000	40136	75	1200	243
17	92	12000	2980	150	19000	7700	78	1240	261
18	125	36000	12200	650	50000	878CO	8.8	1290	3:7
19	112	17000	5140	500	65000	87800	88	1330	316
20	114	4290	1320	350	5000	4730	86	1040	241
21	336	5130¢	46500	305	10000	8100	85	808	185
22	263	11000	7810	360	60000	58300	88	963	230
23	102	10000	2750	150	5330	2160	92	1160	288
24	204	113000	62200	92	393C	976	88	1130	268
25	121	12100	3950	80	2890	624	81	1090	238
26	100	8720	2350	105	5000	1420	78	1060	223
27	99	6280	1680	130	14000	4910	79	978	209
28	90	4820	1170	150	6220	2520	78	903	190
29	82	3700	819	100	461C	1240	78	833	175
30	88	3350	796	83	3420	766	8C	300	173
31	82	3040	673	74	2500	500			
TOTAL	4650		191763	6929		945574	3674		102615
	DISCHARGE F								52961

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B. BOTTOM WITHDRAWAL TUSE; C. CHEMICALLY DISPERSED; N. IN NATIVE WATER: P. PIPFT: S. SIEYL; V., VISUAL ACCUMULATION TUBE: W. IN DISTILLED WATER)

	WATER TEM- PERA- TURE DISCHARGE ( C) (CFS)	CONCEN-	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)				THE S	ICLE 9 IZF (1	N MIL					METHOD OF ANALY- SIS
NOV 18, 1969 1735	5.0 144	1100	428	7	11	 20		42	82	100				VPWC
JAN 12, 1970 1520	6.0 142	655	251	4	- 5	 		25	51	93	100			VPWC
FE8 9 1310	8.0 135	406	148	ġ	14	 		38	58	93	100			VPHC
MAR 6 1300	8.5 166	726	325	1.2	17	 		37	68	95	100			VF / C
APR 20 1340	13.9 101	124	34	13	20	 		41	52	95	100			VP #C
MAY 19 1645	19.0 147	574	228	14	18	 		44	67	95	100			VPMC
JUN 12 1605	18.0 104	2060	578	8	îč	 		4.8	59	69	89	92	98	VPWC
	21.5 135	33000	12000	66	71	 		96	99	160				VPNC
	27.3 79	601	128	30	34	 		85	100					VPWC
JUL 24 0900	19.0 255	213000	147000	42	47	 		89	97	99	100			VPWC
AUG 4 2000	23.5 1270	106000	363000	14	16	 		51	86	99	100			VPHC
AUG 6 0700	18.0 318	160000	137000	39	42	 		82	95	100				VPWC
AUG 18 1945	23.5 1190	167000	537000	17	19	 		52	82	98	160			VPWC
SEP 1 1830	27.0 73	2520	497	14	16	 		55	91	100				VPHC

PARTICLE-SIZE DISTRIBUTION DF SURFACE BED MATERIAL, MATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHOD DF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

		WATER Tem-	NUMBER OF						PART	TICLF S	176					METHER
		PERA-	SAM- PLING	DISCHARGE		PERCEN	T FINE	R THAN	THE S	115 (I	N FILL	IMETER	S) [10	ICATED		METHOD OF ANALY-
DATE	TIME	( c)	POINTS	(CFS)	<b>.</b> C62	.125	.250	•500	1.00	2.00	4.00	8.00	16.7	32 • .1	64.0	
NOV 18, 1969	1735	5.0		144	1	12	82	99	100							s√
FEB 9, 1970	1310	8.0		135		5	55	93	97	98	100					SV
APR 20	1340	13.0		101		2	45	95	99	99	100					SV
JUL 13	1515	27.0		79	5	52	79	92	94	95	96	97	99	100		SV
SEP 1	1830	27.0		73	4	26	85	99	100							SV

## 09408150 VIRGIN RIVER NEAR HURRICANE, UTAH

LOCATION.--Lat 37°09'45", long 113°23'42", in NE NE NE NE NE ST. 1.42 S., R. 14 W., Washington County, at gaging station, at bridge on State Highway 17, 1.8 miles downstream from Quail Creek and 6.2 miles west of Hurricane.

DRAINAGE AREA. -- 1,530 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: March 1967 (miscellaneous), Water temperatures: March 1967 to September 1970, Sediment records: March 1967 to September 1970.

EXTREMES.--1969-70:
Water temperatures: Maximum, 30.0°C July 15; minimum, freezing point Dec. 29, 31, Jan. 2
Sediment concentrations: Maximum daily, 219,000 mg/l Aug. 5; minimum daily, 78 mg/l June 2.
Sediment discharge: Maximum daily, 388,000 tons Aug. 5; minimum daily, 17 tons June 2.

## Period of record:

PRIOG OF Pecord:
Water temperatures: Maximum, 31.0°C July 3, 25, 1967, Aug. 1, 8, 1969; minimum, freezing point Dec. 14, 1967.
Dec. 29, 31, 1968, Jan. 2, 1970.
Sediment concentrations: Maximum daily, 219,000 mg/l Aug. 5, 1970; minimum daily, 37 mg/l July 12, 1969.
Sediment discharge: Maximum daily, 756,000 tons Jan. 25, 1969; minimum daily, 9.0 tons July 15, 1969.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					(ONCE-DA	ILY MEASU	REMENT)					
DAY	oc r	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		14.0		4.0	5.0		14.0	17.0	24.0	26.0	27.0	28.0
2	17.0	10.0	5.0	0.0	9.0		16.0	20.0	18.0	17.5	29.0	21.0
3	14.0	14.5	8.5	3.5	3.0		13.5	15.5	26.0	26.0	21.0	23.0
4	9.0	9.0	6.5		9.5	7.5	7.0	21.0	17.5	20.0	26.0	18.0
5	18.0	-15-0	7.0	4.0	5.5	8.0	8.5	13.5	23.0	23.0	19.0	18.0
6	10.0	10.0	6.0	3.5	11.5	12.0	17.5	19.0	22.5	24.5	20.0	17.5
7	20.0	15.0	5.0	0.5	12.0	13.5	15.0	12.0	14.5	19.5	27.0	14.5
8	12.0	14.0	6.5	5.5	7.0	8.5	17.0	20.0	21.0	26.0	20.5	23.5
9	16.0	11.5	5.0	6.0		14.0	10.0	19.5	16.5	20.5	29.5	17.5
10	19.0	14.0	7.5	8.0		9.0	19.0	13.0	22.0	22.0	19.0	25.5
11	15.0	10.5	4.0	3.0	10.5	10.5	17.0	19.0	13.0	26.5	28.5	27.0
12		15.5	8.5	6.0	10.0	8.0	8.0	12.0	20.5	22.0	20.0	22.0
13	8.5	10.5	9.0	9.0	13.0	14.0		19.5	21.0	29.0	27.0	19.0
14	16.5	14.5	4.0	4.5	10.0	16.0	7.5	11.5	13.0	27.5	21.0	13.5
15	10.5	12.0	9.0	7.5	4.5	9.5	11.0	20.5	24.0	30.0	29.0	22.5
16	17.5	11.0	4.5	8.5	11-0	14.0	10.5	22.0	16.5	22.0	21.0	11.0
17	17.0	9.5	10.0	10.0		9.0	15.5	19.0	27.0	29.0	28.0	11.5
18	15.0	4.5	6.0	6.5	4.5	9.5	16.0	22.0	17.0	29.0	21.5	24.0
19	10.5	10.0	10.0	10.0		6.0	9.0	19.5	25.5	24.5	19.0	23.0
20	14.5	5.5	10.5	7.0	2.0	13.5	16.5	21.5	27.0	28.5	25.0	17.0
21	11.0	10.5	8.0	9.0		14.0	13.5	24.0	22.0	22.0	19.5	17.5
22	15.0	9.0	11.5	5.5	8.0	7.5	16.0	24.0	25.5	20.0	19.0	10.5
23	11.0	5.5	7.0	11.5	7.0	17.0	10.0	23.0	19.0	20.5	27.0	19.0
24	17.0	10.0	10.0	11.0	11.5	9.0	18.0	17.0	29.0	19.5	18.5	11.5
25	18.5	10.0		7.0	7.0	7.0	19.0	15.0	19.5		26.5	16.5
26	12.5	5,5		11.0	14.5	13.0	15.0	16.0	29.0		20.0	9.5
27	19.0		8.5	6.5	8.0	12.0	11.0	24.0	27.0	24.5	27.0	20.0
28	13.0		4.0	8.5		13.5	7.0	17.0	25.5	19.5	26.5	13.5
29	15.0		0.0	2.0		8.0	14.0	23.5	17.0	20.0	28.0	23.5
30	d.5		5.0	8.5		8.0	8.0		14.5	21.0	27.5	14.0
31	14.5		0.0	9.0		12,5				29.0	19.5	
AVG	14.5	11.0	6.5	0.5	8.5	11.0	13.0	18.5	21.5	24.0	24.0	18.5

## 09408150 VIRGIN RIVER NEAR HURRICANE, UTAH--Continued

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	117 108 100 106 115	503 783 496 399 580	158 278 134 114 190	156 155 150 145 149	1020 1160 930 862 920	430 485 377 337 370	196 192 188 190 196	1100 1180 1070 961 1220	582 612 543 493 646
6 7 8 9	117 123 119 118 116	599 1293 785 688 730	189 428 252 219 229	151 186 216 181 199	1040 1960 2770 1840 2580	424 984 1570 899 1320	212 210 209 200 200	1210 1090 1290 1170 1030	693 618 728 632 556
11 12 13 14 15	120 126 125 123 129	794 600 659 676 570	257 204 222 224 199	182 177 173 174 175	1710 1450 1260 1050 1200	840 693 589 493 567	194 201 198 197 201	861 1110 1050 1090 1060	451 602 561 580 575
16 17 18 19 20	133 142 148 157 152	911 1080 1170 1550 1410	327 414 468 657 579	241 347 202 203 213	3600 13000 2270 1840 1830	2340 13200 1240 1010 1050	196 201 207 204 205	1030 1130 1100 1040 952	545 613 615 573 527
21 22 23 24 25	152 172 179 176 164	1620 6101 3180 2180 1820	665 2830 1540 1040 896	207 201 193 192 192	7110 1580 1200 1430 1200	1180 857 625 741 622	199 213 218 200 198	832 1440 1220 863 855	447 828 718 466 457
26 27 28 29 30 31	159 155 152 151 155 163	1830 1300 1200 1110 1270 1460	786 544 492 453 531 631	198 199 198 189 193	1150 1100 1100 1100 1100	615 591 583 561 573	198 205 207 199 203 209	847 934 938 941 1150 954	453 517 524 516 630 538
TOTAL	4269		16600	5727		36171	6246		17829
		JANUARY			FFPRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	JANUARY  MEAN CONCENT TRATION (MG/L)	SFDIMENT DISCHARGE (TGNS/DAY)	MEAN Discharge (CFS)	FEBRUARY  MEAN CHNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDYS/DAY)	MEAN D1SCHARGE (CFS)	MARCH MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
DAY  1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CHNCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3	DISCHARGE (CFS) 21c 195 170 163	MEAN CONCEN- TRATION (MG/L) 1291 764 878 786	DISCHARGE (TGNS/DAY) 731 472 403 346	DISCHARGE (CFS) 182 176 174 176	MFAN CINCEN- TRATION (MG/L) 817 734 802 852	DISCHARGE (TDNS/DAY) 401 349 377 405	D1SCHARGE (CFS) 3C4 529 389 290	MEAN CONCENT TRATION (MG/L) 6000 10004 4000 2800	DISCHARGE (TONS/DAY) 4920 14300 4200 2190
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 210 195 170 163 156 158 162 171	MEAN CONCENTRATION (MG/L) 1291 764 878 786 703 763 618 348 1385	01SCHARGE (TONS/DAY) 731 402 403 346 296 325 270 392 534	DISCHARGE (CFS)  182 176 174 176 176 176 177 167 167	MFAN CINCEN- TRATION (MG/L) 817 734 802 852 801 687 659 833 761	DISCHARGE (TDNS/DAY) 401 349 377 405 381 319 297 376 335	D1SCHARGE (CFS) 3C4 529 389 290 232 242 222 218 210	MEAN CONCEN- TRATION (MG/L) 6005 1505U 4006 2850 2135 1455 1286 1330 1450	DISCHARGE (TDNS/DAY) 4920 14300 4200 2190 1330 947 760 783 822
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS) 21C 195 170 163 156 158 162 171 183 191 196 197 193 188	MEAN CONCENTRATION (MG/L) 1291 764 878 786 703 763 618 348 1385 1146 1115 1011 1211 1211 1211	01SCHARGE (TONS/DAY)  731 402 403 346 296 325 270 392 534 598 567 524 631 513	DISCHARGE (CCFS)  182 176 174 176 176 167 167 163 159 158 164 167 169	MEAN CONCENTRATION (MG/L)  817 734 802 852 801 687 659 833 761 696 636 688 1030 986	DISCHARGE ITOMS/DAY)  401 349 377 405 381 319 297 376 335 299 271 305 464 450	D1SCHARGE (CFS) 3C4 529 389 290 232 242 227 218 21C 214 213 181 169 170	MEAN CONCENTRATION (MGZL) 6005 10004 4006 2800 2130 1450 1286 1120 1450 1120 170 770 750 858	DISCHARGE (TONS/DAY) 4920 14300 4200 2190 1330 947 760 783 822 647 615 386 342 394
1 2 3 4 5 6 7 8 9 1 C 11 12 13 14 15 16 17 18 19	DISCHARGE (CFS) 21C 195 170 163 156 158 162 171 183 191 196 197 199 227 214 197	MEAN CONCENTRATION (MG/L) 1291 764 878 786 703 763 618 140 1110 1011 1110 1011 1110 1110 111	01SCHARGE (TONS/DAY) 731 412 403 346 296 325 270 392 514 587 587 587 581 581 1103 896	DISCHARGE (CFS)  182 176 174 176 177 167 167 163 159 158 164 167 167 161 171 161 159 152	WEAN CINCENTRATION (MG/L) R17 734 802 857 P01 687 659 833 761 696 636 688 1230 986 908 702 713 653 648	DISCHARGE (TONS/DAY)  401 349 377 405 381  319 297 376 335 299 271 305 464 469 419 325 306 268 266	DISCHARGE (CFS) 3C4 529 389 290 290 242 227 218 211 214 213 181 169 168 165 163 16C 147	WFAV CONCENTRATION (MG/L) 6006 1205 4006 2800 2135 1456 1226 1286 1330 1459 1459 1459 1459 1459 1459 1459 1459	DISCHARGE (TONS/DAY) 4920 14300 4200 2190 1330 947 760 783 822 647 615 386 342 342 342 351 312
1 2 3 4 5 5 6 7 8 8 9 10 11 122 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS) 21C 195 170 163 156 158 162 171 183 191 196 197 193 284 199 227 214 197 187	MEAN CONCENTRATION (MG/L) 1291 764 878 786 703 763 618 146 1110 1011 1110 1011 1110 1110 1110	01SCHARGE (TONS/DAY)  731 412 403 346 296 325 270 392 534 588 587 524 631 313 655 614 1100 896 587 571 619 597 476	DISCHARGE (CFS)  182 176 174 176 177 167 167 163 159 158 164 167 169 171 161 159 152 152 153 157 200 214	WEAN CINCENTRATION (MG/L)  #17 734 802 852 P01 687 659 833 761 696 688 1030 986 908 702 113 653 648 845 1070 11360 2770 1020	DISCHARGE (TONS/DAY)  401 349 377 405 381 319 297 376 335 299 271 305 464 452 419 335 306 266 349 454 734 1600 482	DISCHARGE (CFS) 3C4 529 389 290 292 218 217 218 217 218 216 218 216 213 181 169 179 168 165 165 166 167 139 134 128 124 119	WFAV CONCENTRATION (MG/L) 6006 1205 2800 2135 1456 1226 1286 1335 1459 1459 1459 1577 798 826 814 812 7571 587 849 481 527	DISCHARGE (TONS/DAY) 4920 14300 4200 2190 1330 947 760 783 822 647 615 386 342 394 368 351 312 214 212 190 161

## 09408150 VIRGIN RIVER NEAR HURRICANE, UTAH--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		SUSPF	NDED-SEDIMENT (	SISCHARGE, WAT	ER YEAR OC	TOBER 1969 TO S	SEPTEMBER 1970		
		APRIL			MAY			JUNE	
DAY	MEAN D1SCHARGE (CFS)	MEAN CUNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	106 102 99 104 96	262 324 347 422 267	75 49 93 118 69	121 120 132 153 161	534 298 450 890 1340	174 97 160 368 582	86 83 81 79 80	134 78 83 86 131	31 17 18 18 28
6 7 8 9	102 121 119 116 123	367 270 489 717 629	101 88 157 228 209	161 175 160 169 184	950 900 860 980 1040	413 425 372 447 517	87 214 119 111 107	112 14700 3160 994 675	26 9920 1020 298 195
11 12 13 14 15	134 129 115 113 105	936 519 436 366 262	339 181 135 112 74	204 181 166 165 159	1350 1340 990 790 650	744 655 444 352 279	108 103 93 86 81	1580 518 359 217 172	461 144 90 50 38
16 17 18 19 20	97 93 94 93 95	179 195 168 175 209	47 49 43 44 54	166 169 166 149 138	630 820 720 548 428	282 374 323 220 159	76 72 72 69 67	313 168 149 127 106	64 33 29 24 19
21 22 23 24 25	93 97 95 88 92	303 192 178 88 139	76 50 46 21 35	128 115 112 100 106	284 290 264 197 154	98 87 80 53 44	73 73 72 68 68	189 167 169 155 144	37 33 33 28 26
26 27 28 29 30 31	94 126 181 133 121	187 443 1860 630 274	47 150 909 226 90	100 88 83 78 86 82	161 173 99 159 150 140	43 41 22 33 35 31	67 66 69 69 71	119 164 197 185 120	22 29 37 34 23
TOTAL	3278		3955	4277		7954	257¢		12825
		JULY			AUGUST			SEPTEMBER	
DAY	MEAN Discharge (CFS)	JULY MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN UTSCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)	MEAN DISCHARGE (CFS)	SEPTEMBER  MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
DAY 1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	MEAN DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3 4	DISCHARGE (CFS) 70 71 71 84	MEAN CONCEN- TRATION (MG/L) 2:2 204 168 311	DISCHARGE (TONS/DAY) 38 39 32 71	DISCHARGE (CFS) 56 57 67 88	MEAN CONCEN- TRATION (MG/L) 592 577 1100 1060C	DISCHARGE (TONS/DAY) 90 89 199 11800	MEAN DISCHARGE (CFS) 55 65 68 81	MEAN CONCEN- TRATION (MG/L) 2420 4790 6770 3800	DISCHARGE (TONS/DAY) 359 665 1240 831
1 2 3 4 5 6 7 8	DISCHARGE (CFS)  70 71 71 84 92  IO4 87 104 193	MEAN CONCEN- TRATION (MG/L) 217 204 168 311 900 4830 2800 3600 11800	01SCHARGF (TONS/DAY) 38 39 32 71 224 1350 658 1310 7756	UISCHARSF (CFS) 56 57 67 88 491 321 140 88	MEAN CONCEN- TRATION (MG/L) 592 577 1100 1060C 219000 70330 37300 627C 3450	DISCHARGE (TONS/DAY)  90 89 199 11800 388000 68400 14000 14900 820	MEAN DISCHARGE (CFS) 55 65 68 81 583 311 109 64 71	MEAN CONCEN- TRATION (MG/L) 2420 3790 6770 3800 63900 34000 10000 3910 2560	01SCHARGE (TONS/DAY) 359 665 1240 831 178000 28500 2940 683 491
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS)  TO 71 71 84 92 104 81 104 193 208 184 83 70 72	MEAN CONCENTRATION (MG/L) 207 204 168 311 900 4800 2800 31000 7950 8360 2740 433 370	01SCHARGF (TONS/DAY)  38 39 32 71 224  1350 658 1010 7256 7340  4780 614 82 72	UISCHARGE (CFS) 56 57 67 88 491 321 140 88 80 82 81 78 86	MEAN CONCENTRATION (MG/L)  592 577 1100 1060C 219000  70330 37300 627C 3450 3080  2730 2410 3650 15000	DISCHARGE (TONS/DAY)  90 89 199 11800 388000  68400 14000 14000 820 682 597 538 848 3690	MEAN DISCHARGE (CFS) 55 65 68 81 583 311 109 84 71 67 61 138 78	MEAN CONCENTRATION (MG/L) 2423 4790 6773 3803 63900 3010 2563 2313 1463 8900 12003	DISCHARGE (TONS/DAY) 359 665 1240 891 178000 28500 2940 683 491 418 257 240 2980 2539
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS)  70  71  71  84  92  104  81  104  193  208  184  83  70  70  71  70  112  96	MEAN CONCENTRATION (MG/L) 222 126 168 311 900 4850 2850 1860 11800 2740 433 371 300 388 96 51 14 300	OISCHARGE (TONS/DAY)  38 39 32 71 224  1350 658 1010 7236 5440 4780 614 82 72 76 54 73 2990 3630	UISCHARGE (CFS) 56 57 67 88 491 321 140 88 88 82 87 11 128 287 128 582 438	MEAN CONCENTRATION (MG/L) 592 577 11c0 1060c 219000 70330 370c0 627C 3450 3080 2273 1260c 219000 21900 29106 53800 29106 53800 29106	DISCHARGE (TONS/DAY)  90 89 199 11800 388000 68400 14000 14000 820 682 597 508 848 3490 31600 71800 11600 181000 60300	MEAN DISCHARGE (CFS) 65 68 81 583 311 109 64 77 61 138 78 66	MEAN CONCENTRATION (MG/L)  2423 17490 6770 38900 39000 39010 29610 29610 29610 19600	DISCHARGE (TONS/DAY) 359 665 1240 831 178000 28500 2940 683 491 418 257 257 240 2980 2980 2930 713 341 318 595
1 2 3 4 4 5 6 7 8 9 1 C 1 1 1 2 1 3 4 4 5 1 6 1 7 1 1 8 9 2 C 2 2 2 2 4	DISCHARGE (CFS)  7C 71 71 84 92 104 81 104 193 208 184 83 70 72 67 67 77 112 96 81 286 224 104 133	MEAN CONCENTRATION (MG/L)  202	01SCHARGF (TONS/DAY)  38 39 32 71 224  1350 658 1010 7256 5440  4780 614 82 72 56 54 73 2900 3630 875  10100 5780 1400 1510	UISCHARGE (CFS)  56 56 57 67 88 491 321 14c 88 88 82 81 78 86 91 128 287 128 582 438 175 135 333 113 73 61 91 106 127 70 59	MEAN CONCERN TATION (MG/L)  597 10600 219000 37000 37000 34500 34500 2410 34500 251000 51000 51000 6270 6270 6270 6270 6270 6270 6270 6	DISCHARGE (TONS/DAY)  90 89 199 11800 388000 68400 14000 14900 820 682 597 598 448 3690 31600 71800 60300 2840 4120 154000 9760 1110	MEAN DISCHARGE (CFS) 55 65 68 81 109 64 71 67 61 138 76 66 62 63 74 79 81 72 76 82 76	MEAN CONCENTATION (MG/L)  2423 17490 67770 38000 30010 22652 2313 14653 80000 12000	DISCHARGE (TONS/DAY) 359 665 1240 831 178000 28500 2940 683 491 418 257 240 2980 2980 2980 2980 2980 2980 2980 298
1 2 3 4 5 5 6 7 8 9 1 C 1 1 1 2 1 3 1 4 5 1 6 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7	DISCHARGE (CFS)  7C 7C 71 71 84 92 104 81 104 193 208 184 83 70 72 67 70 112 96 81 286 224 104 133 116 77 67 64 57	MEAN CONCENTRATION (MG/L) 2024 168 311 900 4880 2880 21860 2740 4371 31 4300 4000 4000 4000 4000 4000 4000	01SCHARGF (TONS/DAY)  38 39 32 71 224  1350 658 1010 7256 5340  4780 614 82 72 56 54 73 2990 3630 875  10100 5780 1400 1510 946 451 282 197 151 209	UISCHARGE (CFS) 56 57 67 88 491 321 140 88 88 82 81 78 89 128 287 128 287 128 175 135 333 113 73 61 91 106 125 70	MEAN CONCENT AT 100 (MG/L)  597 10000 219000 4270 4250 3050 3050 2730 2410 3050 15000 25100 5100000 51000 51000 51000 51000 51000 51000 51000 51000 51000 51000 51	DISCHARGE (TONS/DAY)  90 89 199 1199 11800 388000 68400 14000 1490 820 682 597 538 848 3690 31603 71800 11603 181000 60300 2840 4120 154000 9760 1110 461 2163 4180 9850 1040 609	MEAN D1SCHARGE (CFS) 55 65 68 81 583 311 109 64 71 67 66 63 78 81 72 74 82 76 75 71 68 67 66 65 65	MEAN CONCENTRATION (MG/L) 2420 31790 63900 34000 10000 3010 2260 22310 11600 12000 1	DISCHARGE (TONS/DAY)  359 665 1240 831 178000 28500 2940 683 491 418 257 240 2980 2530 713 341 318 595 459 448 292 368 423 293 437 291 246 251 298

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT PISCHARGE FOR YEAR (TONS)

53793 1473595

## 09408150 VIRGIN RIVER NEAR HURRICANE, UTAH--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: 6, BOTTOM WITHDRAWAL TUBF; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBF; N, IN DISTILLED WATER)

	OATE	TIME	WATER TEM- PERA- TURE ( C)	DISCHARGE (CFS)		SUSPENDED SFDIMENT DISCHARGE (TONS/DAY)			NER 1		THE S		IN MII					METHOU OF ANALY- SIS
										• • • •							,.	3.0
NOV	20, 1969	1125	5.5	214	1980	1140	4	8		13		32	83	99	100			VPWC
JAY	5. 1970	1455	4	141	738	281	3	- 6				31	65	98				VPWC
FEr	4	1725	10.0	189	783	400	6	9				34	73	100				VPAC
MAK	6	1700	12.	232	1440	902	14	20		33		48	78	99				VPWC
APR	21	1430	13.5	87	24.	56	8	14				7 C	77	190				VPAC
MAY	19	1944	19.5	157	502	213	17	27				55	78	100				VPWC
31314	17	17.5	27.0	74	169	34	10	13				45	51	81	99	100		VPWC
JUL	10	111	22.)	202	10100	5510												
JUL	18	1545	29	98	12600	333	54	72				97	99	100				VPWC
JUL	21	167€	24	476	47600	61230	21	33				93	98	100				VPWC
AUS	5	v745	19.0	467	300000	378000	29	35				71	90	99	103			VPWC
AUG	18	194"	21.3	3777	142000	1180000	18	23				66	93	100				VPWC
AU.	22	1815	19.5	345	192000	179000	32	40				80	94	99	100			VPWC
SEP	2	1125	21.	68	4020	738	9	14				52	90	100				VPWC

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHOD DE ANALYSIS: H, HYOROMETER; O, OPPICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

WATER N			1	PARTICLE SIZ	E			METUOD
PERA- S	(IF  AA -  LING DISCHARGE	PFRCENT FIN	FR THAN T	HF SIZE (IN	MILLIMETERS)	INDICATED		MFTHOD OF ANALY-
		.125 .250	.500 1	.00 2.00 4	.00 B.30 16	.3 32.0	64.0	SIS
NOV 24, 1969 1125 5.5	214 3	16 42	61	73 77	80 84	94 100		SV
FEB 4, 1970 1725 10.3	189 2	11 63	79	82 83	84 86	93 100		SV
APR 21 1430 13.5	67 1	6 69	92	95 96	96 96	96 100		sv
JUL 14 1540 27.5	70 3	12 65	84	88 89	90 91	93 100		S٧
SEP 2 1125 21.0	68 9	43 86	92	92 92	92 92	94 100		s v

### 0941 5000 VIRGIN RIVER AT LITTLEFIELD, ARIZ. (Irrigation network station)

LOCATION. --Lat 36°53', long 113°56', in SW\(\frac{1}{2}\)SW\(\frac{1}{2}\) sec.4, T.40 N., R.15 W., Mohave County, at gaging station 0.4 mile downstream from Beaver Dam Wash, 0.4 mile upstream from Littlefield, and 36 miles upstream from waterline of Lake Mead at elevation 1,221 ft above mean sea level.

DRAINAGE AREA. -- 5,090 sq mi, approximately.

PERIOD OF RECORD. ---Chemical analyses: July 1949 to September 1969 (daily), October 1969 to September 1970 (monthly). Water temperatures: October 1947 to September 1970. Sediment records: October 1947 to September 1988.

### EXTREMES. ~- 1969-70:

Specific conductance: Maximum daily, 3,890 micromhos Aug. 28; minimum daily, 1,640 micromhos Mar. 3. Water temperatures: Maximum, 30.0°C July 13, 14, Aug. 15; minimum, 5.0°C Dec. 7.

Period of record:
Dissolved solids (1949-50, 1953-69); Maximum, 4,250 mg/l Aug. 12, 1964; minimum, 477 mg/l May 1-17, 1969.
Hardness (1949-50, 1953-69); Maximum, 2,250 mg/l Aug. 12, 1964, Aug. 21, 1966; minimum, 290 mg/l May 1-17,

Specific conductance: Maximum daily, 4,650 micromhos Aug. 21, 1966; minimum daily, 689 micromhos May 14, 15, 1969.

Water temperatures: Maximum, 33.5°C July 7, 1953; minimum, 1.5°C Jan. 4, 1949, Jan. 4, 1950.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

CATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SID2) (MG/L)	DIS- SDLVED CAL- CIUM (CA) (MG/L)	OIS- SOLVED MAG- NE- SIUM (MG) (MG/L1	SODIUM (NA) (MG/L)	PD- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCD3) (MG/L)	CAR- BONATE (CD3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
02 02	1100	73 40	21.5	19 19	353 337	102 146	281 216	2 8 2 8	330 286	0	1070 1130	410 390
CEC.	1620	195	11.0		224	95	214	20	347	0	656	310
JAN. 19	1230	238	11.0	17	208	75	185	17	328	0	589	285
FEB. 18 MAR.	1215	132	12.5	17	253	83	254	23	393	0	692	333
20 AFR.	1030	137	12.5	17	262	85	238	21	412	0	802	322
23 MAY	1230	68	18.5	23	343	118	285	27	345	0	1160	400
21	1120	66	21.0	18	349	112	287	27	337	0	1070	369
JLNE	0930	70	20.0	19	357	116	256	29	327	0	1120	375
JLLY 15	1200	68	28.0	19	345	122	250	27	315	0	1110	370
AUG. 27	0945	76	23,5	18	378	112	273	27	512	0	1060	365
SEP. 25	1100	68	16.5	12	361	158	280	26	518	0	1160	405
DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NG3) (MG/L)	DIS- SULVED BORON (B) (UG/L)	DIS- SOLVED SOLIOS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	CIS- SCLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
ост.	SOLVED FLUO- RIDE (F) (MG/L)	(MG/L)	SULVED BORON (B) (UG/L)	SOLVED SOLIOS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SCLVED SDLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO-	(UNITS)
0CT. 02 C4	SOLVED FLUO- RIDE (F)	{NG3}	SOLVED BORON (B)	SOLVED SOLIUS (RESI- DUE AT 180 C)	SOL VED SOL IDS (SUM OF CONSTI- TUENTS)	SCLVED SDLIDS (TONS PER	SOLVED SOLIDS (TONS PER	NESS (CA, MG)	CAR- BONATE HARD- NESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO- MHOS)	
0CT. 02 C4 CEC.	SOLVED FLUO- RIDE (F) (MG/L)	(NG3) (MG/L)	SULVED BORDN (B) (UG/L)	SOLVED SOLIOS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SCLVED SDLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA, MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
OCT. 02 C4 CEC. 09 JAN.	SOLVED FLUO- RIDE (F) (MG/L)	(NG3) (MG/L) 1.8 1.0	SULVED BORDN (B) (UG/L) 930 990	SOLVED SOLIUS (RESI- DUE AT 180 C) (MG/L) 2640 2610	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 2430 2410	SCLVED SDLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY) 478 260	NESS (CA, MG) (MG/L) 1300 1440	CAR- BONATE HARD- NESS (MG/L) 1030 1210	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 3240 3190	7.7 7.9
OCT. 02 C4 CEC. 09 JAN. 19 FEB. 18	SOLVED FLUO- RIDE (F) (MG/L)	(NG3) (MG/L) 1.8 1.0	S(AL VED BORDN (B) (UG/L) 930 990	SOLVED SOL 10S (RESI- DUE AT 180 C) (MG/L) 2640 2610	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 2430 2410	SCLVED SDLIDS (TONS PER AC-FT) 3.30 3.28 2.43	SOLVED SOLIDS (TONS PER DAY) 478 260	NESS (CA,MG) (MG/L) 1300 1440 950	CAR- BONATE HARO- NESS (MG/L) 1030 1210	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 3240 3190 2430	7.7 7.9 7.9
OCT. 02 C4 CEC. 09 JAN. 19 FEB. 18 MAR.	SOLVED FLUO- RIDE (F) (MG/L)	(NG3) (MG/L) 1.8 1.0 	S(ALVED BORON (B) (UG/L) 930 990 	SOLVED SOL IOS (RE SI- DUE AT 180 C) (MG/L) 2640 2610 1790 1650	SOL VED SOL 10S (SUM OF CONSTI- TUENTS) (MG/L) 2430 2410	SCLVED SOLIDS (TONS PER AC-FT) 3.30 3.28 2.43 2.09	SOLVED SOLIDS (TONS PER DAY) 478 260 942 988	NESS (CA, MG) (MG/L) 1300 1440 950 830	C AR- BONATE HARD- NESS (MG/L) 1030 1210 665	3.4 2.5 3.0 2.8	FIC COND- UCTANCE (MICRO- MHOS) 3240 3190 2430 2250	7.7 7.9 7.9 8.0
OCT. 02 C4 CEC. 09 JAN. 19 FEB. 18 MAR. 20 APR. 23	SOLVED FLUO- RIDE (F) (MG/L) 1.1 1.6  1.1	1.8 1.0  3.6	SOLVED BORDN (B) (UG/L) 930 990  610	SOLVED SOL IUS (RE SI- DUE AT 180 C) (MG/L) 2640 2610 1790 1650	SOLVED SOLIOS (SUM OF CONSTI- TUENTS) (MG/L) 2430 2410  1540	SCLVED SDL1DS (TONS PER AC-FT) 3.30 3.28 2.43 2.09 2.52	SOLVED SOLIDS (TONS PER DAY) 478 260 942 988 659	NESS (CA, MG) (MG/L) 1300 1440 950 830 973	C AR- BONATE HARD- NESS (MG/L) 1030 1210 665 561	3.4 2.5 3.0 2.8	FIC COND- UCTANCE (MICRO- MHOS) 3240 3190 2430 2250 2620	7.7 7.9 7.9 8.0 7.6
OCT. 02 C4 CEC. 09 JAN. 19 FEB. 18 MAR. 20 APR. 23 MAY 21	SOLVED FLUO- RIDE (F) (MG/L) 1.1 1.6  1.1	1.8 1.0  3.6 3.4	SOLVED BORDN (B) (UG/L) 930 990  610 760	SOLVED SOL IUS (RESI- DUE AT 180 C) (MG/L) 2640 2610 1790 1650 1960	SOL VED SOL IDS (SUM OF CONSTI- TUENTS) (MG/L) 2430 2410  1540 1850	SCLVED SDLIDS (TONS PER AC-FT) 3.30 3.28 2.43 2.09 2.52 2.65	SOLVED SOLIDS (TONS PER DAY) 478 260 942 988 659 720	NESS (CA, MG) (MG/L) 1300 1440 950 830 973 1000	CAR- BONATE HARD- NESS (MG/L) 1030 1210 665 561 651	3.4 2.5 3.0 2.8 3.3	FIC COND- UCTANCE (MICRO- MHOS) 3240 3190 2430 2250 2620	7.7 7.9 7.9 8.0 7.6 7.9
OCT. O2 C4 CEC. O9 JAN. 19 FEB. 18 MAR. 20 APR. 23 MAY 21 JUNE 18	SOLVED FLU0- RIDE (F) (MG/L) 1.1 1.6  1.1 .8	1.8 1.0  3.6 3.4 2.9	SULVED BORDN (B) (UG/L) 930 990  610 760 780	SOL VED SOL IUS IRE SI- DUE AT 180 CJ (MG/L) 2610 1790 1650 1960 1970 2720	SOL VED SOL IDS (SUM OF CONSTI- TUENTS) (MG/L) 2410  1540 1850 1950 2530	SCLVED SOLIDS (TONS PER AC-FT) 3.30 3.28 2.43 2.09 2.52 2.65 3.44	SOLVED SOLIDS (TONS PER DAY) 478 260 942 988 659 720	NESS (CA, MG) (MG/L) 1300 1440 950 830 973 1000	C AR- BONATE HARD- NESS (MG/L) 1030 1210 665 561 651 666 1060	3.4 2.5 3.0 2.8 3.3 3.4	FIC COND- UCTANCE (MICRO- MHOS) 3240 3190 2430 2250 2620 2620 3140	(UNITS)  7.7 7.9 7.9 8.0 7.6 7.9
OCT. O2 C4 CEC. O9 JAN. 19 FEB. 18 MAR. 23 MAY 21 JULY 15	SOLVED FLUO-RIDE RIDE (F) (MG/L)  1.1 1.6 1.1 .8 .7 1.9 1.0	(NG3) (MG/L) 1.8 1.0  3.6 3.4 2.9 1.0	SULVED BORDN (B) (UG/L) 930 990  610 760 980 1100	SOL VED SOL IUS (RE S1- OUE AT 180 C] (MG/L) 2610 1790 1650 1960 1970 2720 2520	SOL VED SOL IDS (SUM DF CONSTITUENTS) (MG/L) 2430 2410  1540 1850 2530 2400	SCLVED SOLIDS (ITONS PER AC-FT)  3.30 3.28 2.43 2.09 2.52 2.65 3.44 3.26	SOLVED SOLIDS (ITONS PER DAY)  478 260 942 988 659 720 464 427	NESS (CA, MG) (MG/L) 1300 1440 950 830 973 1000 1340	C AR- BONATE HARD- NESS (MG/L) 1030 1210 665 561 666 1060	3.4 2.5 3.0 2.8 3.3 3.4 3.4	FIC COND- UCTANCE (MICRO- MHOS) 3240 3190 2430 2250 2620 2620 3140 3160	(UNITS)  7.7 7.9 7.9 8.0 7.6 7.9
OCT. O2 C4 CEC. O9 JAN. 19 FEB. 18 MAR. 20 APR. 23 MAY 21 JULY	SOLVED FLUG- FLUG- RIDE (F) (MG/L) 1.1 1.6  1.1 .8 .7 1.9	(NG3) (MG/L) 1.8 1.0  3.6 3.4 2.9 1.0	SOL VED BOROM (8) (US/L) 930 990 610 760 980 1100 1100	SOL VED SOL IUS (RE S1- OUE AT 180 C1) (MG/L) 2640 2610 1790 1650 1960 1970 2720 2520 2630	SOL VED SOL IDS (SUM OF CONSTIL	SCLVED SDL1DS (TONS PER AC-FT)  3.30 3.28 2.43 2.09 2.52 2.65 3.44 3.26 3.58	SOLVED SOLIDS (TONS PER DAY)  478 260 942 988 659 720 464 427 461	NESS (CA,MI) (MG/L) 1300 1440 950 830 973 1000 1340 1330 1360	CAR- BONATE HARD- NESS (MG/L) 1030 1210 665 561 666 1060 1050	3.4 2.5 3.0 2.8 3.5 3.3 3.4 3.4	FIL COND- UCTANCE (MICRO- MHOS)  3240 3190 2430 2250 2620 2620 3140 3160 3210	7.7 7.9 7.9 8.0 7.6 7.9 7.7

## 09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ. -- Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

					(ONCE-DA	AILY MEAS	JREMENT)					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3170	2780	2550	2430	2450	2330	2760	3100	3130	3060	3100	3210
2	3180	2740	2500	2390	2440	1810	2870	3140	3180	3060	3110	3220
3 4	3140 3130	2700 2700	2510 2360	2440 2520	2500 2450	1640 1820	3000 3080	3040 3130	3120 3110	3080 3110	3020 3020	3200 3200
5	3150	2650	2530	2510	2490	1990	3150	3200	3130	3130	2590	2650
6	3270		2470	2400	2410	2180	3170	31 70	3130	3070	2590	2670
7	3170	2700	2440	2510	2530	2170	3230	3160	3090	3100	2950	2900
8	3250	2560	2430	2450	2620	2250	3180	3090	3280	3020	3150	3260
9 10	3150 3220	2540 24 <b>7</b> 0	2410	2450 2430	2540 2680	2230 2250	3110 3080	3000 3000	3290 308 <b>0</b>	3090 <b>3010</b>	3160 3150	3100 3400
11	3230	2439	2450	2410	2650	2250	3130	2830	3110	2530	3170	3200
12	3210	2430	2390	2280	2630	2280	3100	2800	3140	2960	3160	3190
13	3140	2530	2430 2470	2450	2630	235C 240(	3190 3140	2860 2960	3130	3080 3050	3150 3150	3230 3220
14 15	3090 3070	2540 2590	2460	2420 2310	2600 2610	2461	3110	3010	3120 3070	3090	3650	3160
16	3090	2530	2450	2340	2580	2371	3170	3000	3120	3040	2830	3230
17	2950	2 20 0	2490	2240	2680	2520	3140	2990	3060	3060	2770	3200
18	3050	2020	2440	2260	2720	2550	3170	2960	3080	3140	3280	3160
19 20	2850 2880	2330 2390	2390 2450	2250 2350	2780 2750	2500 2610	32 <b>00</b> 3170	3040 3170	3090 3090	3150 3110	2090 2390	3160 3170
21	2820	2320	2440	2390	2780	2610	3220	3140	3090	3860	296C	3210
22	2760	2240	2370	2370	2550	2690	3150	3110	3110	2750	2610	3180
23	2710	2380	2410	2330	2450	2780	3170	3180	3140	2900	2790	3190
24 25	2590 2660	2440 2460		2360 2360	2450 2510	2860 2890	3180 3220	3200 3200	3130 3110	3030 3130	3190 3120	3230 3230
26 27	2540 2660	2520 2470	2200 2410	2380 2380	2510 2550	2860 2570	3270 3230	3170 3210	3190 3170	3190 3190	3190 3330	3220 3170
28	2740	2480	2330	2390	2550	2720		3210	3190	3120	3890	3160
29	2730	2400	2360	2410		3020	3160	3200	3150	3020	3560	3170
30	2720 2640	2500	2470 2470	2470 2470		3030 2870	3190	3200 3170	3110	3090 3060	3210 3280	
31												
AVG	2970	2480	2430	2400	2570	2450	3140	3090	3130	3070	3050	3150
		TEI	4PERATURE	(°C) OF	WATER, WAT	TER YEAR ( AILY MEASI	OCTOBER 19 UREMENT)	969 TO SE	PTEMBER 1	970		
υAY	ост	TE!	4PERATURE DEC	(°C) OF	WATER, WAT (ONCE-DA	TER YEAR ( AILY MEASI MAR	OCTOBER 19 JREMENT) APR	969 TO SE	PTEMBER 1	970 JUL	AUG	SEP
IJΑΥ		NOV	DEC	JAN	(ONCE-DA	AILY MEASI MAR	JREMENT)	MAY	JUN	JUL		
1	23.0	NOV	DEC 12.0	JAN 6.2	(ONCE-DA	MAR 14.0	JREMENT)  APR  16.0	MAY 22.0	JUN 25.0	JUL 27.0	26.C	26.0
1 2 3	23.0 22.0 18.0	NOV 19.0 19.0 19.0	DEC 12.0 12.0 11.0	JAN 6.0 6.0	(ONCE-DA FEB 11.0 11.0 12.0	MAR 14.0 11.0 12.0	JREMENT)  APR  16.0 18.0 16.0	MAY 22.0 22.0 23.0	JUN 25.0 27.0 28.0	JUL 27.0 28.0 27.0	26.C 27.0 27.C	26.0 23.0 23.0
1 2 3 4	23.0 22.0 18.0 22.0	NOV 19.0 19.0 19.0 17.0	DEC 12.0 12.0 11.0	JAN 6.0 6.0 6.0	(ONCE-DA FEB 11.0 11.0 12.0 12.0	MAR 14.0 11.0 12.0 14.0	APR 16.0 18.0 16.0 19.0	MAY 22.0 22.0 23.0 23.0	JUN 25.0 27.0 28.0 26.0	JUL 27.0 28.0 27.0 27.0	26.C 27.0 27.C 25.0	26.0 23.0 23.0 20.0
1 2 3 4 5	23.0 22.0 18.0 22.0 21.0	NOV 19.0 19.0 19.0 17.0 16.0	12.0 12.0 11.0 12.0 10.0	JAN 6.0 6.0 6.0 6.0	FEB 11.0 11.0 12.0 12.0 12.0	MAR 14.0 11.0 12.0 14.0 14.0	APR 16.0 18.0 16.0 19.0 21.0	MAY 22.0 22.0 23.0 23.0 24.0	JUN 25.0 27.0 28.0 26.0 23.0	JUL 27.0 28.0 27.0 27.0 27.0	26.C 27.0 27.C 25.0 26.0	26.0 23.0 23.0 20.0 18.0
1 2 3 4 5	23.0 22.0 18.0 22.0 21.0	NOV 19.0 19.0 19.0 17.0 16.0	12.0 12.0 12.0 11.0 10.0	JAN 6.0 6.0 6.0 6.0 6.0	FEB 11.0 11.0 12.0 12.0 12.0	MAR  14.0 11.0 12.0 14.0 14.0 15.0	APR  16.0 18.0 16.0 19.0 21.0	MAY 22.0 22.0 23.0 23.0 24.0	JUN 25.0 27.0 28.0 26.0 23.0	JUL 27.0 28.0 27.0 27.0 27.0	26.C 27.0 27.C 25.C 26.0	26.0 23.0 23.0 20.0 18.0
1 2 3 4 5	23.0 22.0 18.0 22.0 21.0	NOV 19.0 19.0 19.0 17.0 16.0	12.0 12.0 11.0 12.0 10.0	JAN 6.0 6.0 6.0 6.0 6.0	FEB 11.0 11.0 12.0 12.0 12.0 14.0	MAR  14.0 11.0 12.0 14.0 14.0 16.0	APR 16.0 18.0 16.0 19.0 21.0	MAY 22.0 22.0 23.0 23.0 24.0	JUN 25.0 27.0 28.0 26.0 23.0 22.0 23.0	JUL 27.0 28.0 27.0 27.0 27.0 27.0	26.C 27.0 27.C 25.C 26.0 27.0	26.0 23.0 23.0 20.0 18.0
1 2 3 4 5 6 7 8	23.0 22.0 18.0 22.0 21.0 21.0 21.0 21.0	NOV 19.0 19.0 19.0 17.0 16.0 15.0 15.0	12.0 12.0 11.0 12.0 10.0 5.0	JAN 6.0 6.0 6.0 6.0 6.0	FEB 11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0	MAR  14.0 11.0 12.0 14.0 14.0 16.0 16.0 16.0	APR  16.0 18.0 16.0 19.0 21.0	MAY 22.0 22.0 23.0 23.0 24.0	JUN 25.0 27.0 28.0 26.0 23.0	JUL 27.0 28.0 27.0 27.0 27.0	26.C 27.0 27.C 25.C 26.0	26.0 23.0 23.0 20.0 18.0 20.0 20.0 22.0
1 2 3 4 5	23.0 22.0 18.0 22.0 21.0 21.0 21.0	NOV 19.0 19.0 19.0 17.0 16.0	12.0 12.0 12.0 12.0 12.0 10.0	JAN 6.0 6.0 6.0 6.0 6.0 6.0	(ONCE-DA FEB 11.0 11.0 12.0 12.0 12.0 14.0 14.0	MAR  14.0 11.0 12.0 14.0 14.0 15.0 16.0	APR 16.0 18.0 16.0 19.0 21.0 22.0 21.5	MAY 22.0 22.0 23.0 23.0 24.0 20.0 23.0	JUN 25.0 27.0 28.0 26.0 23.0 22.0 23.0	JUL 27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0	26.C 27.0 27.C 25.0 26.0 27.0 27.0	26.0 23.0 23.0 20.0 18.0
1 2 3 4 5 6 7 8 9	23.0 22.0 18.6 22.0 21.0 21.0 21.0 21.0 21.0	NOV  19.0 19.0 19.0 17.0 16.0  15.0 16.0 16.0	12.c 12.c 12.c 11.0 12.0 10.0 5.0 11.0	JAN 6.0 6.0 6.0 6.0 6.0 6.0 8.0 12.0	(ONCE-DA FEB 11.0 11.0 12.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0	MAR  14.0 11.0 12.0 14.0 14.0 16.0 16.0 16.0 16.0 14.0	APR  16.0 18.0 16.0 19.0 21.0 22.0 21.0 22.0 21.5 22.0 21.0	MAY  22.0 22.0 23.0 23.0 24.0 20.0 23.0 22.0 20.0	JUN 25.0 27.0 28.0 26.0 23.0 21.0 21.0 23.0 23.0	JUL 27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 24.0	26. C 27. 0 27. C 25. C 26. 0 27. 0 27. 0 27. 0 29. 0 29. 0	26.0 23.0 23.0 20.0 18.0 20.0 24.0 24.0 25.0
1 2 3 4 5 6 7 8 9 10	23.0 22.0 18.0 22.0 21.0 21.0 21.0 21.0 21.0	NOV  19.0 19.0 19.0 17.0 16.0 15.0 15.0 16.0	12.0 12.0 12.0 12.0 10.0 10.0 5.0 11.0	JAN 6.0 6.0 6.0 6.0 6.0 8.0 8.0 8.0 12.0	FEB 11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 17.0	MAR  14.0 11.0 12.0 14.0 14.0 16.0 16.0 16.0 16.0 14.0	APR  16.0 18.0 19.0 21.0 22.0 21.0 22.0 21.0 21.0	MAY  22.0 22.0 23.0 23.0 24.0 20.0 23.0 22.0 22.0 22.0	25.0 27.0 28.0 26.0 23.0 22.0 21.0 24.0 23.0	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26.C 27.0 27.C 25.C 26.0 27.0 27.0 27.0 29.0 29.0	26.0 23.0 23.0 20.0 16.0 20.0 22.0 24.0 25.0 25.0
1 2 3 4 5 6 7 8 9	23.0 22.0 18.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0	19.0 19.0 19.0 17.0 16.0 	12.c 12.c 11.0 12.0 10.0 5.0 11.0 11.0	JAN 6.0 6.0 6.0 6.0 6.0 6.0 8.0 12.0	FEB 11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 17.0 18.0	MAR  14.0 11.0 12.0 14.0 14.0 15.0 16.0 16.0 16.0 14.0 14.0 14.0 16.0	APR  16.0 18.0 16.0 19.0 21.0 22.0 21.5 22.0 21.0 21.0 16.0	MAY  22.0 23.0 23.0 23.0 24.0 20.0 23.0 22.0 21.0 21.0	25.0 27.0 28.0 26.0 23.0 22.0 21.0 21.0 23.0 24.0 24.0	JUL 27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 24.0 25.0 28.0 30.0	26.C 27.0 27.C 25.C 26.0 27.0 27.0 29.0 29.0 29.0	26.0 23.0 23.0 20.0 18.0 20.0 24.0 26.0 25.0 25.0
1 2 3 4 5 6 7 8 9 10	23.0 22.0 18.0 22.0 21.0 21.0 21.0 21.0 21.0	NOV  19.0 19.0 19.0 17.0 16.0 15.0 15.0 16.0	12.0 12.0 12.0 12.0 10.0 10.0 5.0 11.0	JAN 6.0 6.0 6.0 6.0 6.0 8.0 8.0 8.0 12.0	FEB 11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 17.0	MAR  14.0 11.0 12.0 14.0 14.0 16.0 16.0 16.0 16.0 14.0	APR  16.0 18.0 19.0 21.0 22.0 21.0 22.0 21.0 21.0	MAY  22.0 22.0 23.0 23.0 24.0 20.0 23.0 22.0 22.0 22.0	25.0 27.0 28.0 26.0 23.0 22.0 21.0 24.0 23.0	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26.C 27.0 27.C 25.C 26.0 27.0 27.0 27.0 29.0 29.0	26.0 23.0 23.0 20.0 16.0 20.0 22.0 24.0 25.0 25.0
1 2 3 4 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16	23.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	NOV  19.0 19.0 19.0 17.0 17.0 16.0 15.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0	0EC  12.C 11.0 12.0 12.0 10.0 10.0 10.0 11.0 11.0	JAN 6.0 6.0 6.0 6.0 6.0 8.0 8.0 8.0 12.0	(ONCE-DA FEB 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0	MAR  14.0 11.0 12.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 16.0	APR  16.0 18.0 16.0 19.0 21.0 22.0 21.0 22.0 21.0 22.0 21.0 16.0 17.0	22.0 22.0 23.0 23.0 24.0 20.0 23.0 22.0 22.0 21.0 24.0 22.0	JUN 25.0 27.0 28.0 26.0 23.0 21.0 24.0 24.0 24.0 24.0 25.0	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 24.0 28.0 30.0	26.C 27.0 27.C 25.C 26.0 27.0 27.0 27.0 29.0 29.0 29.0 29.0 29.0 28.C	26.0 23.0 23.0 20.0 18.0 20.0 24.0 24.0 25.0 25.0 25.0 20.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	23.0 22.0 18.6 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	NOV  19.0 19.0 19.0 19.0 17.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0	0EC  12.C 12.C 12.C 11.0 12.0 10.0 5.0 11.0 11.0 11.0 11.0 11.0 11.	JAN 6.7 6.0 6.0 6.0 6.0 6.0 8.0 8.0 12.0 12.0 12.0 11.0 11.0 11.0	FEB  11.0 11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAR  14.0 11.0 12.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0	APR  16.0 18.0 18.0 19.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 16.0 21.0 17.0 20.0	22.0 22.0 23.0 24.0 20.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 22.0 22	25.0 27.0 28.0 26.0 23.0 23.0 21.0 24.0 24.0 24.0 24.0 25.0 25.0	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26. C 27. C 27. C 25. C 26. 0 27. 0 27. 0 29. 0 29. 0 29. 0 29. 0 29. 0 29. 0 29. 0 29. 0 29. 0	26.0 23.0 20.0 18.0 20.0 24.0 24.0 25.0 25.0 23.0 20.5 20.0 21.0 22.0
1 2 2 3 4 4 5 5 6 6 7 8 8 9 10 11 12 13 14 15 16 17 18	23.0 22.0 18.6 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	NOV  19.0 19.0 19.0 17.0 17.0 16.0 15.0 16.0 16.0 17.0 17.0 17.0 17.0 10.0	0EC  12.C 12.C 11.0 12.0 12.0 10.0 10.0 10.0 11.0 9.5 11.0 11.0 11.0 11.0 12.0	5AN 6.0 6.0 6.0 6.0 6.0 8.0 8.0 8.0 12.0 9.0 12.0 11.0 12.0 11.0 12.0	TEB  11.0 11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 16.0 17.0 18.0 16.0 16.0 16.0 17.0 18.0 16.0 16.0	MAR  14.0 11.0 12.0 14.0 14.0 15.0 16.0 16.0 16.0 16.0 17.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0	APR  16.0 18.0 18.0 19.0 21.0 21.0 21.0 21.5 22.0 21.0 21.0 21.0 21.0 21.0 21.0 22.0	HAY  22.0 22.0 23.0 23.0 24.0 20.0 23.0 22.0 20.0 21.0 22.0 20.0 21.0 23.0 23.0 23.0 23.0	JUN 25.0 27.0 28.0 26.0 23.0 21.0 24.0 24.0 24.0 25.0 25.0 27.0	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26. C 27. C 27. C 25. C 26. O 27. O 27. O 29. O	26.0 23.0 20.0 18.0 20.0 24.0 25.0 25.0 25.0 20.0 21.0 22.0 21.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	23.0 22.0 18.6 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	NOV  19.0 19.0 19.0 19.0 17.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 17.0 17.0 16.0	0EC  12.C 12.C 12.C 11.0 12.0 10.0 5.0 11.0 11.0 11.0 11.0 11.0 11.	JAN 6.7 6.0 6.0 6.0 6.0 6.0 8.0 8.0 12.0 12.0 12.0 11.0 11.0 11.0	FEB  11.0 11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	MAR  14.0 11.0 12.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0 17.0 16.0 16.0	APR  16.0 18.0 18.0 19.0 21.0 21.0 21.0 21.0 22.0 22.0 21.0 16.0 21.0 17.0 20.0	22.0 22.0 23.0 24.0 20.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 22.0 22	25.0 27.0 28.0 26.0 23.0 23.0 21.0 24.0 24.0 24.0 24.0 25.0 25.0	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26. C 27. C 27. C 25. C 26. 0 27. 0 27. 0 29. 0 29. 0 29. 0 29. 0 29. 0 29. 0 29. 0 29. 0 29. 0	26.0 23.0 20.0 18.0 20.0 24.0 24.0 25.0 25.0 23.0 20.5 20.0 21.0 22.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	23.0 22.0 18.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 19.0 17.0	NOV  19.0 19.0 19.0 17.0 16.0 15.0 15.0 16.0 16.0 17.0 16.0 17.0 16.0 10.0 10.0 10.0	0EC  12.c 11.0 12.0 12.0 12.0 10.0 10.0 11.0 11.0	JAN 6.2 6.0 6.0 6.0 6.0 6.0 8.0 12.0 11.0 12.0 11.0 11.0 13.0	TERB  11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 16.0 17.0 18.0 16.0 16.0 17.0 18.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0	14.0 11.0 12.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	APR  16.0 18.0 16.0 19.0 21.0 21.5 22.0 21.5 22.0 21.5 22.0 21.0 16.0 17.0 20.0 18.0 18.0 19.0	22.0 22.0 23.0 23.0 24.0 20.0 23.0 22.0 22.0 22.0 22.0 22.0 24.0 23.0 24.0 23.0	25.0 27.0 28.0 28.0 23.0 22.0 23.0 21.0 24.0 24.0 25.0 25.0 25.0 27.0 27.0	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 24.0 28.0 30.0 30.0 30.0 26.0 29.0 29.0 29.0 28.0 28.0	26. C 27. 0 27. C 25. 0 27. 0 27. 0 27. 0 27. 0 29. 0	26.0 23.0 20.0 18.0 22.0 24.0 25.0 25.0 20.5 20.5 20.0 21.0 22.0 23.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	23.0 22.0 18.6 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	NOV  19.0 19.0 19.0 17.0 16.0 15.0 15.0 15.0 16.0 16.0 16.0 17.0 17.0 17.0 10.0 10.0 10.0 10.0	0EC  12.0 12.0 12.0 12.0 10.0 5.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12	JAN 6.7 6.0 6.0 6.0 6.0 8.0 8.0 12.0 11.0 12.0 11.0 12.0 11.0 13.0 13.0	TEB  11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	14.0 11.0 12.0 14.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 16.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	APR  16.0 18.0 16.0 19.0 21.0 21.5 22.0 21.5 22.0 21.0 16.0 17.0 18.0 22.0 18.0 19.0	22.0 22.0 23.0 23.0 24.0 20.0 22.0 20.0 21.0 22.0 22.0 22.0 22	25.0 27.0 28.0 26.0 23.0 22.0 23.0 21.0 24.0 24.0 25.0 27.0 27.0 27.0 27.0 27.0	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26. C 27. 0 27. 0 25. C 26. 0 27. 0 27. 0 29. 0 20. 0	26.0 23.0 23.0 20.0 22.0 24.0 25.0 25.0 23.0 21.0 22.0 23.0 22.0 23.0 23.0
1 2 3 4 4 5 5 6 7 7 8 8 9 9 10 11 11 12 13 14 15 16 17 18 19 20 21 22 23	23.0 22.0 18.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 18.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0	NOV  19.C 19.0 17.0 17.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 10.0 10.0 10.0 10	0EC  12.C 12.C 12.0 12.0 12.0 10.0 5.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12	JAN 6.7 6.0 6.0 6.0 6.0 8.0 12.0 12.0 12.0 11.0 11.0 11.0 11.0 13.0 13.0	FEB  11.0 11.0 12.0 12.0 12.0 14.0 14.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	MAR  14.0 11.0 12.0 12.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0	APR  16.0 18.0 19.0 21.0 21.0 21.0 22.0 21.0 22.0 22.0 22	22.0 22.0 23.0 23.0 24.0 20.0 23.0 22.0 22.0 22.0 22.0 22.0 23.0 24.0 24.0 23.0 23.0 23.0 23.0 24.0 24.0	25.0 27.0 28.0 26.0 23.0 21.0 24.0 24.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 24.0 28.0 30.0 26.0 29.0 29.0 29.0 29.0 28.0 36.0 26.0	26.C 27.0 27.C 25.C 26.0 27.0 27.0 27.0 29.0 29.0 29.0 29.0 29.0 25.0 25.0 25.0 25.0 25.0 25.0 25.0 26.0	26.0 23.0 23.0 20.0 16.0 22.0 24.0 25.0 25.0 21.0 22.0 23.0 22.0 23.0 22.0 23.0 23.0 23
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 23 24	23.0 22.0 18.6 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 19.0 19.0 19.0 17.0 17.0 17.0 17.0 17.0	NOV  19.0 19.0 19.0 17.0 16.0 16.0 15.0 16.0 16.0 17.0 17.0 10.0 10.0 10.0 10.0 10.0 10	0EC  12.0 12.0 12.0 12.0 10.0 5.0 11.0 11.0 11.0 11.0 12.0 12.0 12.0 12	JAN 6.7 6.0 6.0 6.0 6.0 8.0 8.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 13.0 13.0 13.0	TEB  11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0	14.0 11.0 12.0 12.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 19.0	APR  16.0 18.0 16.0 19.0 21.0 21.5 22.0 21.5 22.0 21.0 16.0 17.0 18.0 22.0 18.0 19.0 19.0 21.0 19.0 22.0	22.0 22.0 23.0 23.0 24.0 20.0 23.0 22.0 20.0 22.0 22.0 22.0 22	25.0 27.0 28.0 28.0 26.0 23.0 21.0 24.0 24.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26. C 27. 0 27. 0 27. 0 25. C 26. 0 27. 0 27. 0 29. 0 29. 0 29. 0 29. 0 29. 0 29. 0 25. 0 25. 0 25. 0 25. 0 25. 0 25. 0 27. 0	26.0 23.0 23.0 20.0 22.0 24.0 25.0 25.0 21.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 23
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 10 17 18 19 20 21 22 23 24 25	23.0 22.0 18.6 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	NOV  19.0 19.0 19.0 17.0 16.0 15.0 15.0 15.0 16.0 16.0 17.0 17.0 10.0 10.0 10.0 10.0 10.0 10	0EC  12.0 12.0 12.0 10.0 5.0 11.0 11.0 9.5 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	JAN 6.7 6.0 6.0 6.0 6.0 8.0 8.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 13.0 13.0	TEB  11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 16.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16	14.0 11.0 12.0 12.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	APR  16.0 18.0 16.0 19.0 21.0 21.5 22.0 21.5 22.0 21.0 16.0 17.0 20.0 18.0 18.0 19.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	22.0 22.0 23.0 23.0 24.0 20.0 22.0 20.0 21.0 22.0 22.0 22.0 22	25.0 27.0 28.0 28.0 26.0 23.0 21.0 24.0 24.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 28.5 27.0 28.0	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26. C 27. 0 27. 0 25. C 26. 0 27. 0 27. 0 29. 0 29. 0 29. 0 29. 0 29. 0 25. 0 26. 0	26.0 23.0 23.0 20.0 16.0 22.0 24.0 25.0 25.0 20.5 20.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0
1 2 3 4 5 6 7 8 8 9 10 11 12 2 13 14 4 15 16 17 18 19 20 21 22 3 24 25 26	23.0 22.0 18.0 22.0 21.0 20.0	NOV  19.C 19.0 17.0 16.0 15.0 15.0 15.0 16.0 16.0 16.0 16.0 10.0 10.0 10.0 10	0EC  12.C 12.C 12.C 12.0 12.0 12.0 10.0 5.0 11.0 11.0 11.0 11.0 11.0 12.0 12.0 12	JAN 6.7 6.0 6.0 6.0 6.0 8.0 12.0 12.0 12.0 11.0 11.0 11.0 13.0 13.0 13.0 13.0 13	FEB  11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAR  14.0 11.0 12.0 12.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	APR  16.0 18.0 19.0 21.0 21.0 21.0 22.0 21.0 22.0 22.0 22	22.0 22.0 23.0 24.0 23.0 24.0 20.0 22.0 22.0 22.0 22.0 22.0 23.0 24.0 24.0 24.0 23.0 23.0 23.0 24.0 24.0 25.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	25.0 27.0 28.0 26.0 23.0 21.0 24.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26.C 27.0 27.0 25.C 26.0 27.0 27.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	26.0 23.0 23.0 20.0 20.0 20.0 24.0 25.0 25.0 20.5 20.5 21.0 21.0 21.0 23.0 23.0 22.0 22.0 22.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 4 15 15 16 17 18 19 20 21 22 23 24 25 26 26 26 28 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 18 18 18 18 18 18 18 18 18 18 18 18	23.0 22.0 18.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	NOV  19.0 19.0 19.0 17.0 16.0 15.0 15.0 15.0 16.0 16.0 17.0 17.0 10.0 10.0 10.0 10.0 10.0 10	0EC  12.0 12.0 12.0 10.0 5.0 11.0 11.0 9.5 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	JAN 6.7 6.0 6.0 6.0 6.0 8.0 8.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 13.0 13.0	TEB  11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 14.0 16.0 16.0 17.0 18.0 16.0 16.0 16.0 16.0 17.0 18.0 16.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	14.0 11.0 12.0 14.0 14.0 14.0 14.0 14.0 16.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0	APR  16.0 18.0 16.0 19.0 21.0 21.5 22.0 21.5 22.0 21.0 16.0 17.0 20.0 18.0 18.0 19.0 19.0 19.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	22.0 22.0 23.0 23.0 24.0 20.0 23.0 22.0 22.0 22.0 22.0 23.0 23	25.0 27.0 28.0 26.0 23.0 21.0 24.0 24.0 24.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26. C 27. 0 27. 0 25. c 26. 0 27. 0 27. 0 29. 0 20. 0	26.0 23.0 23.0 20.0 16.0 22.0 24.0 25.0 25.0 20.5 20.0 21.0 22.0 23.0 23.0 23.0 23.0 23.0 23.0 22.0
1 2 3 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 26 27 28 29	23.0 22.0 18.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	19.0 19.0 19.0 17.0 17.0 16.0 15.0 15.0 16.0 16.0 16.0 10.0 10.0 10.0 10.0 11.0 11	0EC  12.0 12.0 12.0 12.0 10.0 5.0 11.0 9.5 11.0 11.0 11.0 12.0 12.0 12.0 12.0 12.0	JAN 6.0 6.0 6.0 6.0 6.0 8.0 8.0 12.0 11.0 12.0 11.0 12.0 11.0 12.0 11.0 13.0 13.0 13.0 13.0 13.0	TEB  11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 16.0 17.0 18.0 18.0 16.0 18.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	14.0 11.0 12.0 14.0 14.0 14.0 14.0 14.0 15.0 16.0 16.0 16.0 17.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	APR  16.0 18.0 16.0 19.0 21.0 21.5 22.0 21.5 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	22.0 22.0 23.0 23.0 24.0 20.0 22.0 20.0 21.0 22.0 22.0 24.0 22.0 23.0 24.0 23.0 23.0 24.0 23.0 24.0 25.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	25.0 27.0 28.0 26.0 23.0 21.0 24.0 24.0 24.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26. C 27. 0 27. 0 25. C 26. 0 27. 0 27. 0 29. 0 20. 0	26.0 23.0 23.0 20.0 16.0 22.0 24.0 25.0 25.0 20.5 20.0 21.0 23.0 23.0 23.0 23.0 22.0 23.0 22.0 23.0 22.0 23.0 22.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 4 15 15 16 17 18 19 20 21 22 23 24 25 26 26 26 28 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 19 18 18 18 18 18 18 18 18 18 18 18 18 18	23.0 22.0 18.0 22.0 21.0 21.0 21.0 21.0 21.0 21.0 21	NOV  19.C 19.0 19.0 17.0 16.0 15.0 15.0 16.0 16.0 16.0 16.0 10.0 10.0 10.0 10	0EC  12.c 12.c 12.c 12.0 12.0 12.0 10.0 5.0 11.0 11.0 11.0 12.0 12.0 12.0 12.0 13.0 12.0 13.0 10.0 8.0	JAN 6.7 6.0 6.0 6.0 6.0 8.0 12.0 12.0 11.0 11.0 11.0 12.0 12.0 13.0 13.0 13.0 13.0 13.0	FEB  11.0 11.0 12.0 12.0 12.0 14.0 14.0 14.0 16.0 16.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MAR  14.0 11.0 12.0 12.0 14.0 15.0 16.0 16.0 16.0 17.0 18.0 17.0 18.0 18.0 19.0 18.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19	IREMENT)  APR  16.0 18.0 19.0 21.0 21.0 21.0 22.0 22.0 22.0 21.0 22.0 17.0 20.0 18.0 18.0 18.0 19.0 19.0 20.0 21.0 20.0 21.0 21.0 20.0 21.0 20.0 21.0 20.0 21.0	22.0 22.0 23.0 23.0 24.0 20.0 22.0 22.0 22.0 22.0 22.0 23.0 23	25.0 27.0 28.0 26.0 23.0 21.0 24.0 24.0 24.0 25.0 25.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	27.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	26.C 27.0 27.0 25.C 26.0 27.0 27.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	26.0 23.0 23.0 20.0 18.0 22.0 24.0 25.0 25.0 23.0 23.0 23.0 21.0 23.0 22.0 23.0 22.0 22.0 22.0 22.0

AVG 19.5 13.4 10.2 10.0 14.3 14.5 19.1 23.0 25.4 26.7 26.6 22.5

## 09415200 VIRGIN RIVER NEAR RIVERSIDE, NEV.

LOCATION (revised).--Lat 36°41'13", long 114°16'20", in NW4SW4 sec.27, T.14 S., R.69 E., Clark County, 4.6 miles downstream from Riverside bridge, 14 miles southwest of Mesquite, and about 10 miles upstream from high water-line of Lake Mead at elevation 1,221.4 ft above mean sea level.

DRAINAGE AREA. -- 5,920 sq mi, approximately.

PERIOD OF RECORD, -- Chemical analyses: October 1968 to September 1970.

REMARKS. -- This station was operated by the Environmental Protection Agency, during the period January 1964 to September 1969, 0.9 miles upstream from the present site.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CES)	TEMPER- ATURE (DEG C)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SOD [UM {NA} {MG/L}	(K)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONAT (CO3) (MG/L	E
OCT.										
Ca	1500	70	21.0	357	134	350	32	230	c	
NOV.	1210	A175	12.0	260	94	272	23	264	0	
DEC.	. 12.00	ALIS	12.0	200	4	212	23	254	0	
04	1145	A175	8.0	248	89	265	22	340	r	
JAN.	B 1145	200	1.0	260	86	260	22	292	0	
FER.		200	1.0	200	00	200		2,2	•	
25	1130	A185	15.5	26C	92	270	22	274	c	
MAR. 16	1110	A170	17.5	238	91	270	20	230	0	
APR.									_	
^8	1130	31	21.0	377	164	416	27	240	0	
11	1270	A90	22.0	362	131	370	28	218	o	
^3	1945	A1.3	26.0	423	182	515	37	198	0	
JULY 09	C 1100	A.7	34.0	412	188	527	40	144	0	
		A		712	200	221		244	•	
DATE	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (4G/L)	DIS- SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD+ NESS (CA,MG) (MG/L)	SODIUM AD- SORP- TION RATIC	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	LAB PH (UNITS)	DIS- SOLVED OXYGEN (MG/L)	FIELD PH (UNITS)
OCT.										
^8 NGV.	1260	500	3000	567	144^	4.0	3770	7.9	7.7	8.1
15 DEC.	RRO	380	2120	1000	1040	3.7	2380	8.0	9.9	8.2
r4	810	345	2010	951	985	3.7	2780	7.6	10.4	8.2
JAN. 06	805	355	2051	1117	1000	3.6	2780	7.6	13.0	B • 2
FEB.	5. 2	370	203	11:7	1000	3.0	2100	1.0	13.0	5.2
25	850	350	2680	1040	1030	3.7	2850	7.9	9.9	B•1
MAR. 16	870	368	2060	946	968	3.8	2780	7.7	9.4	8.0
APR.										
^8 MAY	1370	592	3310	237	142C	4.5	4200	7.7	8.5	8.1
11	1297	505	2869	695	1440	4.2	3700	7.9	8.3	8.1
33 JULY	1770	690	3950	13.9	1800	5.3	4810	7.8	6.6	
JULY	1690	71.2	3990	7.5	1800	5.4	5000	7.9	7.4	

A ESTIMATED.

B INCLUDES 0.62 MG/L OF NITRATE (AS N) AND 0.03 MG/L OF TOTAL DISSOLVED PHOSPHORUS (AS P). DATA
FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY, ALAMEDA, CALIF.

C INCLUDES LESS THAN 0.01 MG/L OF TOTAL DISSOLVED PHOSPHORUS (AS P). DATA FURNISHED BY ENVIRONMENTAL
PROTECTION AGENCY, ALAMEDA, CALIF.

## 09419510 MUDDY RIVER BELOW OVERTON, NEV.

LOCATION.--Lat 36°29'31", long 114°23'32", in SWiSEi sec. 33, T.16 S., R.68 E., Clark County, 4 miles southeast of Overton and about 3.8 miles downstream from high waterline of Lake Mead at elevation 1,221.4 ft above mean sea level.

DRAINAGE AREA. -- 6,920 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: October 1969 to September 1970.

REMARKS. -- Discharge includes all return flow from Overton State Wildlife Management Area.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	CIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	CAL~ CIUM (CA) (MG/L)	MAG- NE- S IUM (MG) (MG/L)	SOD TUM (NA) (MG/L)	PO- TAS- SIUM (K) {MG/L}	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
OCT.									
29	1037	20	21.5	142	79	245	23	348	e
JAN. ^6Α ΔPR.	1430	38	7.3	142	77	236	21	346	0
08	1410	18	20.0	220	146	426	34	406	0
C9B	1210	2.5	26.0	23C	146	473	38	430	n

DATE	SULFATE {SO4} (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NFSS {CA,MGI {MG/L}	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	EAJ H9 (271ND)	DIS- SOLVED DXYGFN (MG/L)	FIELD PH (UNITS)
ect.										
09 JAN.	670	177	1680	93.7	68C	4.1	2210	8.0	9.5	8.3
06	656	150	1530	157	671	4.0	2110	7.9	11.2	8.2
APP.										
r8	1240	307	2740	133	115C	5.5	3490	7.9	8.7	8.1
JULY										
P4	1280	325	2890	195	1170	6.0	368C	7.8	7.3	~-

A INCLUDES 0.55 MG/L OF NITRATE (AS N) AND 0.09 MG/L OF TOTAL DISSOLVED PHOSPHORUS (AS P). DATA FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY, ALAMEDA, CALIF.

B INCLUDES 0.22 MG/L OF TOTAL DISSOLVED PHOSPHORUS (AS P). DATA FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY, ALAMEDA, CALIF.

### LAS VEGAS WASH BASIN

## 09419700 LAS VEGAS WASH NEAR HENDERSON, NEV.

LOCATION. -- Lat 36°05'20", long 114°59'05", in SEiSW sec. 30, T.21 S., R.63 E., Clark County, 3.5 miles north of Henderson and 6.0 miles upstream from high waterline of Lake Mead at elevation 1,221.4 ft above mean sea level.

DRAINAGE AREA. -- 2,125 sq mi, of which 1,518 sq mi contribute directly to surface runoff.

PERIOD OF RECORD .-- Chemical analyses: October 1968 to September 1970.

REMARKS.--Discharge includes waste water and sewage effluent from industrial plants. This station was operated by the Environmental Protection Agency, during the period January 1964 to June 1970. All data prior to July 1970, and nutrient data thereafter, furnished by Environmental Protection Agency, Alameda, Calif.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
NOV.									
19						534	30	227	0
DEC.									
03						510	29	240	0
16			~			486	28	211	0
JAN.								221	
06 JULY						460	30	236	0
09	1100	34	24.0	295	116	598	35	31.2	0
AUG.	1100	54	24.0	295	110	270	3,	312	U
24	1330	33	23.0	293	118	612	35	290	0
SEP.	2000	33	23.0	2,,,					-
21	1235	37	17.0	210	94	294	20	280	0

DATE	SULFATE (SD4) (MG/L)	CHLO- RIDE (CL) (MG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC- COND- UCTANCE (MICRO- MHOS)	LAB PH (UNITS)	DIS- SOLVED OXYGEN (MG/L)	FIELD PH (UNITS)
NOV.										
19	961	776			1130		4210	7.3		
DEC.										
03	894	726			1040		4010	7.2		
16	908	695			1050		3880	7.4		
JAN.										
06	857	654			958		3730	7.4		
JULY	1010	040	2200	200				<b>-</b> ,	4 2	
09 AUG.	1040	849	3300	303	1210	7.5	4660	7.4	4.2	
24	1050	040	2220	207	4000		4740	7 /	5.9	7.8
SEP.	1050	840	3330	297	1220	7.6	4 <b>7</b> 60	7.6	5.9	7.0
21	710	370	2090	209	910	4.2	2530	7.6	6.9	8.1
21	110	510	2090	209	910	4.2	2530	1.0	0.9	0.1

DATE	AMMONIA AS N (MG/L)	NITRATE AS N (MG/L)	NITRITE AS N (MG/L)	ORGANIC NITROGEN AS N (MG/L)	ORTHO PHOSPHATE AS P (MG/L)	TOTAL DIS- SOLVED PHOS- PHORUS AS P (MG/L)
NOV.						
19		6.0	• 27		6.8	7.3
DEC.						
03	4.8	6.1	•52	•76	7.4	8.5
16		7.4	.06		6.8	6.8
JAN.						
06		5.2	.10		6.8	6.8
JULY			,			
09		3.1				7.0

## LAS VEGAS WASH BASIN

## 09419750 LAS VEGAS WASH BELOW HENDERSON, NEV.

LOCATION. -- Lat 36°05'55", long 114°56'40", in NW NK as sec. 28, T.21 S., R.21 E., Clark County, 5 miles northeast of Henderson, and 3.5 miles upstream from high waterline of Lake Mead at elevation 1,221.4 ft above mean sea level.

DRAINAGE AREA. -- 2,179 sq mi, of which 1,571 sq mi contribute directly to surface runoff.

PERIOD OF RECORD. -- Chemical analyses: March 1969 to September 1970.

REMARKS.--Discharge includes waste water and sewage effluent from industrial plants. This station was operated by the Environmental Protection Agency, during the period March 1999 to June 1970. All data prior to July 1970, and nutrient data thereafter, Jurnished by Environmental Protection Agency, Alameda, Calif.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	. TIME	DIS CHAR (CFS	GE	TEMPER- ATURE (DEG C)	CAL- CIUM (CA) (MG/L	MAG- NE- SIUM (MG) (MG/L)	SODIU (NA) (MG/L	(K)	BONATE (HCO3)		E
NOV.								, ,	227	0	
18. DEC.							624	61	226	U	
03.							596	55	225	0	
16.							633	52	203	Ó	
JAN.											
06.							648	52	204	0	
JULY			٠,	22.0	484	198	715	72	278	0	
09. AUG.		А	34	23.0	404	190	115	12	210	Ü	
24.		A	34	23.0							
SEPT			-						•		
21.	1105	A	40	17.0							
DATE	SULFATE (SC4) (MG/L)	CHLO- RIDE (CL) (MG/L)	( (	IRESI-	DIS- ' SOLVED SOLIDS (TONS PER DAY)	HAPD- NESS (CA,MG) (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRC- MHOS)	LAB PH (UNITS)	DIS- SOLVED CXYGFN (MG/L)	FIELD PH (UNITS)
NOV. 18 DEC.	1340	1070				1750		5600	7.8		
03	1300	1010				1620		5280	7.7		
16	1400	1050				1690		5450	7.4		
JAN. 06	1320	1050				1580		5460	7.4		
JULY 09 AUG.	1550	1240		4850	445	2020	6.9	6390	7.8	8.2	
24 SEPT.								B 5800		8.4	8.2
21								B 5500		9.1	8.2

DATE	AMMONIA AS N (MG/L)	NITRATE AS N (MG/L)	NITRITE AS N (MG/L)	ORGANIC NITROGEN AS N (MG/L)	ORTHO PHOSPHATE AS P (MG/L)	TOTAL DIS- SOLVED PHOS- PHORUS AS P (MG/L)
NOV.						
18		14	•06		4.8	4.8
DEC.						
03	.58	12	.14	.36	5.2	5.5
16	~~	13	•09		4.6	4.6
JAN.						
06		11	.04		4.9	4.9
JULY						
09		12				3.4

A ESTIMATED. B FIELD DATA.

DATE

NOV. 19... DEC. 04... 16... JAN. 06... JULY 09...

### LAS VEGAS WASH BASIN

## 09419800 LAS VEGAS WASH NEAR BOULDER CITY, NEV.

LOCATION.—Lat 36°07'20", long 114°54'15", in NE[SE] sec.14, T.21 S., R.63 E., Clark County, about 0.8 mile upstream from high waterline of Lake Mead at elevation 1,221.4 ft above mean sea level and 11 miles northwest of Boulder City.

DRAINAGE AREA. -- 2,193 sq mi, of which 1,586 sq mi contribute directly to surface runoff.

PERIOD OF RECORD. -- Chemical analyses: October 1968 to September 1970.

REMARKS.--Discharge includes waste water and sewage effluent from industrial plants. This station was operated by the Environmental Protection Agency, during the period January 1964 to September 1969. Nutrient and traceelement data furnished by Environmental Protection Agency, Alameda, Calif.

					M AG-			PO~				
DAT	TIME	DIS- CHARG (CFS)	F ATURE	CAL- CIUM (CA) (MG/L	NE- SIU* (MG)	- 4 SO:	DIUM Na) G/L)	TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	RONATE (CO3)		
OCT.					186		70	64	244	0		
NOV.				465						-		
15. DEC.	144	5 5	2 12.0	449	183		66	51	240	c		
:2. J∆N.	1200	5	6 8.2	384	160	5	98	53	234	c		
17. FEB.	111	5 5	6 3.0	372	156	6	37	5C	216	c		
21.	103	5	1 9.5	419	178	6	67	54	232	3		
MAR. 15.	130	4	5 17.0	452	184	7	30	62	226	0		
APR. 17.	,	5	9 17.0	435	169	7	15	52	248	С		
MAY 11.		. 4	7 21.0	440	182	6	47	5.8	222	0		
JUNE C3.				470	192		95	62	268	0		
JULY	1			480	193		01	70	290	c		
AUG.	,									e		
24. SEPT	·		6 24.0	478	194		90	65	282			
21.	105	4	5 18.0	456	1 96	6	42	57	266	0		
PATE	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	SCLIDS S (REST- S DUF AT ( 180 C)	DIS- OLVED OLIOS TONS PER (	HARD- NESS (CA,MG) (MG/L)	SODIU AD- SORP- TION RATIO	F C C! UCT: ( M I)	ECI- IC ND- ANCE CRO- OS) (I	LAB PH UNITS)	DXYGEN	FIELD PH UNITS)	
9	1540	111	4647	651	1920	6.6	6	coc	7.9	9.0	8.1	
NCV. 15	1500	1127	4740	609	1870	6.7	5	590	8.0	10.0		
DEC.	1380	943	3860	591	1620	6.5	5	247	7.8	10.6	8.1	
JAN. 77	1317	991	3921	598	1570	7.0	5	301	7.1	12.0	8.2	
FFB. 20	143^	1040	4110	573	1750	6.9		567	7.9	10.5	8.3	
MAR. 15	1600	1197	450 ~	553	1480	7.3	61	ngn	7.6	9.3	8.1	
APR. 17	1470	955	397r								8.1	
MAY			-	622	171^	7.5		31.0	7.8	9.4		
11 JUNE	1727	1767	4293	543	1850	6.5		570	8.1	A . 5	8.5	
73 JULY	1657	1137	4587	445	1960	6.8	60	216	8.0	9.5		
('9 AUG.	157	1187	477^	439	1790	6.8	6.	240	7.8	7.8		
24 SFPT.	1561	1100	464^	451	1990	6.7	5	930	7.7	8.0	8.2	
21	1390	1130	4700	571	1900	6.4	52	201	9.0	9.2	8.4	
				OR THO-	D1 S0 - PH	TAL S- DLVED HOS-	IRON	MANGA- NESE	COPPER	R ZINC		VANA-
AMMONIA AS N (MG/L)	NITRATE AS N (MG/L)	NITRITE AS N (MG/L)	ORGANIC NITROGEN AS N (MG/L)	PHOSPHA AS P		IS P	(FE) MG/L)	(MN) (MG/L)	(CU) (MG/L)	(ZN)	ARSENIC (AS) (MG/L)	DIUM (V) (MG/L)
AS N	AS N	AS N (MG/L)	NITROGEN AS N	PHOSPHA AS P (MG/L)	) (i	IS P IG/L) (I	(FE)	(MN)	(CU)	(ZN) (MG/L)	(AS)	(V)
AS N (MG/L)	AS N (MG/L)	AS N (MG/L)	NITROGEN AS N (MG/L)	PHOSPHA AS P (MG/L)	) (h	IS P IG/L) (I	(FE) MG/L)	(MN) (MG/L)	(CU) (MG/L)	(ZN) ) (MG/L)	(AS) (MG/L)	(V) (MG/L)
AS N (MG/L)	AS N (MG/L)	AS N (MG/L)	NITROGEN AS N (MG/L)	PHOSPHA AS P (MG/L)	) (A	IS P IG/L) (I	(FE) MG/L)	(MN) (MG/L)	(CU) (MG/L)	(ZN) (MG/L)	(AS) (MG/L)	(V) (MG/L)
AS N (MG/L) 	AS N (MG/L)  13	AS N (MG/L)  •04 •11	NITROGEN AS N (MG/L) 	PHOSPHA AS P (MG/L) 4:8	) (A	S P (G/L) (( 5.0 5.5	(FE) MG/L) 	(MN) (MG/L)	(CU) (MG/L)	(ZN) (MG/L)	(AS) (MG/L)	(V) (MG/L) 

TOTAL

#### COLORADO RIVER MAIN STEM

#### 0942 0900 LAKE MEAD NEAR LAS VEGAS BEACH, NEV.

LOCATION. -- Lat 36°06'30", long 114°49'10" (unsurveyed), Clark County, 2.8 miles east-southeast of Las Vegas Beach and 10 miles northeast of Henderson.

DRAINAGE AREA. -- 167,800 sq mi, approximately, at Hoover Dam site.

PERIOD OF RECORD .-- Chemical analyses: October 1968 to September 1970.

REMARKS.—This station has been operated by the Environmental Protection Agency, and Bureau of Reclamation since July 1988. Samples collected and field data furnished by Bureau of Reclamation, Boulder City, Nev.; nutrient data furnished by Environmental Protection Agency, Alameda, Calif.

CHEMICAL ANALYSES. WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DEPTH (FT)	WATER TEMPER- ATURE (DEG C)	SPE- CIFIC CONDUCT- ANCE (MICRO- MHOS)	FIELD PH (UNITS)	DIS- SOLVED OXYGEN (MG/L)	AMMONIA AS N (MG/L)	NITRATE AS N (MG/L)	NITRITE AS N (MG/L)	ORGANIC NITRO- GEN AS N (MG/L)	ORTHO PHOS- PHATE AS P (MG/L)	TOTAL DIS- SOLVED PHOS- PHORUS AS P (MG/L)
NOV											
25	10	17.5	1160	7.7	7.8	.11	. 34	<.01	.28	.01	.02
25	175	14.0	1180	7.7	1.8						
FEB											
26	10	13.5	1080	7.6	9.6	.04	.41	<.01	.10	.01	.02
26	160	12.0	1160	7.8	10.2						
MAY											
27	10	23.0	1145	8.9	10.0	.08	. 41		.22	< .01	.01
27	175	13.5	1200	7.3	7.1			~-			
AUG											
24	10	30.5		8.5	10.1	.06	.02			<.01	• 04
24	175	14.5		7.9	4.2						

#### 09420950 LAKE MEAD AT SADDLE ISLAND, NEV.

LOCATION.--Lat 36°03'45", long 114°47'40", in NE\( 2 \) sec.11, T.22 S., R.64 E., Clark County, directly offshore from Southern Newada Water Project intake structure on Saddle Island, and 7 miles north-northeast of Boulder City.

DRAINAGE AREA. -- 167,800 sq mi, approximately, at Hoover Dam site.

PERIOD OF RECORD. -- Chemical analyses: October 1968 to September 1970.

REMARKS.—This station has been operated by the Environmental Protection Agency, and Bureau of Reclamation since July 1968. Samples collected and field data furnished by Bureau of Reclamation, Boulder City, Nev.; nutrient data furnished by Environmental Protection Agency, Alameda, Calif.

			SPE-								DIS-
			CIFIC						ORGANIC	ORTHO	SOLVED
		WATER	CONDUCT	_	DIS-				NITRO-	PHOS-	PHOS-
		TEMPER-	ANCE	FIELD	SOLVED	AMMONIA	NITRATE	NITRITE	GEN	PHATE	PHORUS
	DEPTH	ATURE	(MICRO-	PH	OXYGEN	AS N	AS N	AS N	AS N	AS P	AS P
DATE	(FT)	(DEG C)	MHOS)	(UNITS)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)
NOV											
26	10	18.0	1150	8.2	7.1	• 09	.38	<.01	.18	.01	.02
26	125	17.5	1170	8.3	7.1						
26	195	14.0	1110	8.2	4.3						
FEB											
26	10	13.0	1060								
26	100	12.0	1080	7.5	9.0						
26	180	12.0	1090	8.3	8.9						
MAY											
27	10	21.0	1150	5.6	9.4	< .08	.61		.20	< .01	< .01
27	100	15.0	1140	8.5	8.8						
27	195	13.0	1130	8.4	8.8						
AUG	-										
24	10	30.5		8.7	11.0		• 02			< .01	.04
24	100	18.0		8.2	3.2						
24	195	13.5		7.9	5.8						

## 09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.

LOCATION.--Lat 36°00'58", long 114°44'13", in NE<sub>2</sub>SW<sub>2</sub> sec. 3, T. 30 N., R. 23 W., Gila and Salt River meridian, on state line between Mohave County, Ariz., and Clark County, Nev., at gaging station midway between Hoover Dam intake towers.

DRAINAGE AREA.--187,800 sq mi, approximately.

					DIS-		DIS-			
				DIS-	SOLVED		SOLVED			
			DIS-	SOLVED	MAG-	DIS-	PO-			DIS-
		STAGE (FT	SOLVED	CAL- CIUM	NE- Sium	SOLVED	TAS- Sium	BICAR- BONATE	CAR- BONATE	SOLVED SULFATE
	DEPTH	ABOVE	SIL1CA (SIO2)	(CA)	(MG)	(NA)	(K)	(HCO3)	(CO3)	(SO4)
DATE	(FT)	DATUM)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)
OCT.										
23 23	.0 10 25	1147 1137	8.5	84	34	118	4.0	132 132	0	341
23	25	1122						132		
23	75	1072	8.9	84	34	118	4.0	132	0	342
23	125	1022	8.9	91	32	116	4.0	157	ō	332
23	175	972	8.9	91	31	116	4.0	159	٥	332
23	225	922						162		
23 23	250 275	897 872	8.9	90	31	113	4.0	163 163	0	328
23	325	822						163		
23	375	772	8.9	89	32	111	4.0	163		321
23	425	722						167		
NOV.										
26	10	1149	10	88	33	114	4.0	139	0	340
26 26	10 25	1139 1124						139 139	0	
26	75	1074						140	ŏ	
26	125	1024	7.8	88	33	110	4.0	139	ŏ	330
26	175	974	8.0	91	31	105	4.0	159	Ō	312
26	225	924	8.3	91	31	103	4.0	161	1	307
26	250	899	8.5	90	31	98	4.0	161	1	297
26	275	874						165	0	
26 26	325 375	824 774	8.0	90	31	96	4.0	165 162	0 1	291
26	425	724					7.0	168	ò	
JAN.					-				•	
02	10	1153	8.9	88	32	113	4.0	145	0	337
02		1143			==			145	0	
02	25	1128						145	0	
02	75	1078 1028					~-	145 144	0	
02	125 175	978	8.5	90	33	110	4.0	146	ŏ	325
02	225	928	8.4	90	32	108	4.0	156	ŏ	320
02	256	903	8.7	90	32	106	4.0	163	ō	312
02	275	878	8.5	89	32	106	4.0	165	0	311
02	325	828						163	0	
02	375 425	778	9.2	89	31	105	4.0	165	0	302
02 29	.0	728 1154	9.2	90	33	109	4.0	165 149	0	330
29	10	1144	/:-				7.1			
29	25	1129							~ 4	
29	75	1079								
29	125 175	1029 979								
29 29	225	929	9.7	90	33	109	4.0	148		330
29	250	904	9.2	90	33	105	4.0	149	ŏ	323
29	275	879	9.7	90	33	105	4.0	159	ŏ	321
29	325	829	9.2	90	32	104	4.0	160	0	312
29	375	779			<b>.</b> :	104				
29 FEB.	425	729	10	90	31	101	4.0	166	0	305
26	.0	1153	7.0	90	33	108	5.0	151	0	329
26	10	1143						151		
26	25	1128	7.0	90	33	108	5.0	151	0	330
26	75	1078						151		-~
26	125	1028						151		
26 26	175 225	978 928	8.0	89	23	108	5.0	151 154		323
26	250	903	8.2	89	32	108	5.0	154	0	319
26	275	878	8.5	89	32	104	5.0	160	ŏ	310
26	325	828						160		
26	375	778	8.5	86	31	99	5.0	161	0	296
26	425	728						162		
MAR. 31	.0	1151	7.4	91	32	108	5.0	153	0	330
31	.0 10	1141	7.4				3.0	154		330
31	23	1126						154		<b>4</b> _
31	75	1076						154		
31	125	1026			==			154		
31	175 225	976 926	8.0	89 89	32	109 106	5.0	154	0	325
31	225	926 901	8.3 8.3	99 90	32 31	106	5.0 5.0	157 157	ò	315 315
31	275	875	8.3	90	31	104	5.0	157	ő	315
31	325	826						159		
31	375	776						160		
31	425	726	8.3	89	31	100	5.0	161	0	299

## 09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

PERIOD OF RECORD. --Chemical analyses: October 1940 to September 1970.
REMARKS, --Samples collected by Eureau of Reclamation and analyzed by the Metropolitan Water District of Southern California, LaVerne, Calif.

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA:MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UOTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.										
23	104	1.0	761	1.03	350	242	2.7	1190	7.8	20.0
23	102		701	1.05	349	241		1190	7.8	19.5
23	102				349	- 0		1190	7.8	19.5
23	102	1.2	760	1.03	350	242	2.7	1190	7.9	20.0
23	100	1.8	764	1.04	359	230	2.7	1180	7.8	18.0
23	96	2.0	760	1.03	355	225	2.7	1160	7.9	14.5
23	94				353	220		1150	7.8	13.5
23	94	1.6	753	1.02	354	220	2.6	1150	7.7	12.0
23	94 94				353 353	219 219		1150 1150	7.8 8.0	12.0 12.0
23 23	94	1.4	743	1.01	353	220	2.6	1150	8.1	12.0
23	94	1.7	743		353	216	2.0	1150	7.5	12.0
NOV.					300					
26	98	1.9	759	1.03	355	241	2.6	1190	7.9	18.0
26	98							1200	7.7	18.0
26	98							1200	8.1	18.0
26	98							1200	7.8	18.0
26	98	2.3	743	1.01	355	241	2.5	1200	8.0	18.0
26	92	3.0	726	.99	355	225	2.4	1180	8.1	14.5
26 26	89 88	2.9 2.9	718 701	.98 .95	355 352	221 218	2.4	1160 1150	8.3 8.3	13.5 13.0
26	89	2.7	701		332	210	2.5	1160	8.1	12.0
26	89							1150	8.2	12.0
26	89	2.7	694	.94	352	217	2.2	1150	8.3	12.0
26	89							1150	7.5	12.0
JAN.										
02	98	1.6	756	1.03	353	234	2.6	1200	7.6	14.5
02	101							1200	7.7	14.5
02	100							1200	7.6	14.5
02	100							1200	7.6	14.5
02	98 100	1.7	745	1.01	360	240	2.5	1200 1200	7.6 7.6	14.5 14.5
02	96	2.2	739	1.01	358	230	2.5	1160	7.9	13.5
02	92	2.3	729	.99	356	222	2.4	1150	7.9	13.0
02	90	2.6	726	.99	356	221	2.4	1150	7.8	13.0
02	90							1150	7.6	12.0
02	90	2.1	715	.97	352	217	2.4	1150	7.6	12.0
02	89							1150	7.6	12.0
29	99	2.0	751	1.02	360	238	2.5	1210	7.9	13.5
29	99 99							1230	7.9	13.0
29 29	99 98							1240 1240	7.9 7.9	13.0 13.0
29	78 98							1230	7.9	13.0
29	98						. ::	1230	7.9	13.0
29	98	2.2	750	1.02	360	239	2.5	1230	7.9	13.0
29	98	2.2	739	1.01	360	238	2.4	1230	7.9	13.0
29	96	2,1	738	1.00	360	230	2.4	1220	7.9	12.5
29	92	2.6	726	.99	356	225	2.4	1200	7.8	12.0
29	91							1190	7.5	12.0
29	91	2.7	718	.98	354	218	2.3	1180	7.6	12.0
FEB. 26	97	1.4	746	1.01	360	236	2.5	1230	8.3	14.0
26	98	1.4	/46	1.01	360	236	2.5	1230	8.3	14.0
26	97	1.3	747	1.02	360	236	2.5	1230	8.3	13.5
26	97							1230	8.2	12.5
26	98							1210	8.1	12.5
26	97							1210	8.0	15.0
26	96	2.2	741	1.01	358	232	2.5	1210	8.0	12.0
26	96	2.2			356	228	2.5	1200	8.0	12.0
26	91	2.3	721	.98	351	220	2.4	1190	8.0	12.0
26	91							1160	8.0	11.5
26 26	87 87	2.6	696	.95	344	344	2.3	1150 1150	8.0 8.0	11.5 11.5
MAR.	8/							1130	8.0	11.5
31	96	1.7	748	1.02	361	235	2.5	1180	7.9	14.0
31	97		, 40			200		1180	8.0	14.0
31	97							1190	8.0	14.0
31	97							1190	8.1	13.5
31	96							1180	8.1	13.0
31	96	2.3	744	1.01	356	230	2.5	1150	7.8	12.0
31	94	1.8	730	.99	354	225	2.5	1150	8.2	12.0
31 31	92 91	2.1	726 725	• 99	354 354	225 224	2.4	1150 1150	7.9 8.0	12.0 12.0
31	91	2.3		.99	354	224	2.4	1150	7.9	12.0
31	91							1140	8.2	11.5
31	91	2.3	706	.96	350	218	2.3	1150	8.0	11.5
					000					

## 09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

DATE	DEPTH (FT)	STAGE (FT ABOVE DATUM)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SGLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BUNATE (CU3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
APR. 28	.0	1151	7.8	90	33	109	5.0	155	0	325
28	10	1141						155	ō	
28 28	25 75	1126 1076						154 154	0	
28	125	1026						154	0	
28	175 225	976 926		 90	32	108		155 154	0	320
28 28	250	901	7.8 7.8	90	32	108	5.0 5.0	155	ŏ	321
28	275	<b>87</b> 6	7.8	90	32	108	5.0	155	0	317
28 28	325 375	826 776	8.0	89	31	106	5.0	156 157	0	310
28	425	726						160	ō	
MAY 28	.0	1151	7.0	91	33	109	5.0	155	0	322
28	10	1141						154	0	
28 28	25 75	1126 1076						155 155	0	
28	125	1026						155	0	***
28 28	175 225	976 926	7.0 8.0	90 90	33 31	109 107	5.0 5.0	155 157	0	321 314
28	250	901	7.8	90	31	106	5.0	157	0	316
28	275 325	876 826		89		106	5.0	159 159	0	312
28 28	375	776	7.6		31			160	ŏ	
28	425	726	7.6	89	31	105	5.0	160	0	307
28 JUNE	435	716				-		160	0	
30		1151	7.6	87	32	109	5.0	143	0	324
30	10 25	1141 1126						144 143	0	
30	75	1076	7.4	90	31	109	5.0	153	0	323
30	125 175	1026 976	8.2	91	31	107	5.0	157 157	0	316
30	225	926		~-				159	0	
30	250 275	901 876	7.6	90	31	107	5.0	160 160	0	314
30	325	826						161	ō	
30	375 425	776 726	8.0	90	31	107	5.0	160 161	0	313
30	438	713						161	ŏ	
30	.0	1151	8.8	78	34	112	5.0	122	0	335
30	10	1141								
30	25 75	1126 1076	8.5 8.5	80 90	33 33	110	5.0 5.0	126 155	0	332
30	125	1026				106				323
30	175 225	976 926	8.8	89	32	104	5.0	159		 311
30	250	901	8.8	89	32	104	5.0	159	0	311
30	275	876								
30	325 375	826 776	9.0	89	32	104	5.0	159	0	312
30	420	731								
AUG. 25	.0	1151	8.2	78	34	112	5.0	115	0	336
25	10	1141						116		
25 25	25 75	1126 1076	8.9 8.5	79 89	34 33	112 108	5.0 5.0	117 153	0	336 325
25	125	1026						155		
25 25	225 250	926 901	8.5 8.7	90 90	32 32	102 102	5.0 5.0	160 159	0	311 312
25	275	876						161		
25 25	325 375	826 776	8.9	90	32	102	5.0	159 160	0	312
28	175	976						156		
28 SEP.	430	721						160		
25	0	1152	8.0	81	33	110	5.0	124	0	329
25 25	10 25	1142 1127						126 124	0	
25	75	1077	9.0	81	34	114	5.0	126	0	337
25 25	125 175	1027 977	8.2	92	32	94	4.0	157 157	0	295
25	225	927	8.5	90	31	102	4.0	161	o	306
25 25	250 275	902 87 <i>7</i>	8.8	90	31	98	4.0	161	0	294
25	325	827				==		161 161	0	
25	375 425	777	10					161	ō	
25 25	425 432	727 720	10	90	31	103	4.0	163 165	0	308
									-	

## 09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA;MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
APR. 28	95	2.1	744	1.01	360	233	2.5	1150	8.2	15.0
28	95							1160	7.7	14.5
28	95							1160	7.7	14.5 13.5
28 28	96 95							1160 1160	7.8 7.9	13.5
28	95							1150	7.7	13.0
28	95 94	2.6	737 737	1.00	356 356	230 229	2.5	1150 1150	8.1	13.0 12.5
28 28	94	1.9 1.8	737	1.00	356	229	2.5 2.5	1150	7.0 8.0	12.5
28	94							1150	7.8	12.0
28 28	92 91	2.1	722	.98	352	223	2.5	1140 1130	7.8 7.8	12.0 12.0
MAY	71									
28	96	2.3	743	1.01	363	236	2.5	1150	8.1	16.5
28 28	96 95							1160 1160	8.1 8.0	16.0 16.0
28	96							1160	7.9	15.5
28	96					233		1160 1160	7.9	14.5
28 28	96 93	2.0	741 729	1.01	360 354	233	2.5 2.5	1150	7.8 7.8	13.5 12.0
28	93	2.2	730	.99	354	225	2.5	1150	7.8	12.0
28	92 90		700	.98		222	2.5	1140 1140	7.8	12.0
28 28	90	2.3	723	.78	352	222	2.5	1140	7.7 7.7	12.0 12.0
28	90	2.3	717	.98	352	221	2.4	1130	7.7	12.0
28 JUNE	91							1140	7.8	12.0
30	96	1.4	734	1.00	349	232	2.5	1150	8.1	24.0
30	96							1150	7.9	24.0
30	96 95	1.8	739	1.01	354	229	2.5	1150 1150	7.9 7.7	24.0 19.0
30	95							1150	7.9	14.0
30	95	2.2	734	1.00	357	228	2.5	1150 1140	7.9	13.5 13.0
30	93 92	2.2	729	.99	352	221	2.5	1120	7.8 7.7	12.5
30	91							1100	7.7	12.0
30	92 92							1120 1130	7.7 7.8	12.0 11.5
30	92	2.2	729	.99	352	220	2.5	1130	7.6	12.0
30	92							1130	7.7	12.0
JULY	96	.5	730	.99	335	235	2.7	1150	7.9	28.0
30	96							1150	7.9	28.5
30	94	.8	727	.99	338	235	2.6	1150	7.8	28.0
30	93 92	2.4	738	1.00	360	233	2.4	1150 1150	7.6 7.7	18.0 15.5
30	92							1150	7.8	14.0
30	90 90	2.3	722	.98 .98	354 354	22 <b>4</b> 22 <b>4</b>	2.4	1130 1130	7.8	12.5 12.5
30	90	2.5	723	.78	354	224	2.4	1130	7.8 7.9	12.5
30	90							1130	7.7	12.0
30	90 90	2.2	723	.98	354	224	2.4	1130 1130	8.1 7.7	12.0 12.0
AUG.	70							1130	/./	12.0
25	97	.9	729	.99	335	241	2.7	1130	7.8	29.0
25 25	98 97	1.0	732	1.00	339	243	2.6	1130 1130	7.6 7.7	29.0 28.5
25	94	2.1	741	1.01	358	232	2.5	1150	7.9	21.0
25	95				_==			1150	7.6	15.5
25 25	89 89	2.4	720 720	.98 .98	356 356	22 <b>5</b> 226	2.4	1120 1120	7.8 7.6	13.0 12.5
25	90							1120	7.6	12.5
25	90							1130	7.6	12.0
25 28	90 94	2.0	722	.98	356	225	2.4	1130 1150	7.7 7.8	12.0
28	90							1130	7.7	12.0
SEP.	97	.9	726	.99	340	238	2.6	1130	7.8	24.5
25 25	97							1150	7.8	24.5
25	98							1150	7.9	24.5
25 25	98 94	2.6	7 <b>44</b> 700	1.01	342 361	23 <b>9</b> 232	2.7 2.2	1150 1150	7.8 7.6	24.5 17.5
25	94							1150	8.0	14.5
25	89 89	2.7	71 <b>4</b> 698	.97	354 352	222 220	2.4	1130 1130	7.7	13.5 13.0
25 25	89 89	2.2	698	.95				1130	8.0 7.9	13.0
25	89							1130	7.8	12.0
25 25	90 91	2.1	721	.98	354	220	2.4	1140 1140	7.8 7.6	12.0 12.0
25	90					220		1140	7.6	12.0

# 09421500 COLORADO RIVER BELOW HOOVER DAM, ARIZ.-NEV. (Irrigation network station)

LOCATION (revised). --Lat 36°00'55", long 114°44'16", in NE SW sec. 3, T.30 N., R.23 W., Gila and Salt River meridian, on state line between Mohave County, Ariz., and Clark County, Nev., downstream from gaging station in Hoover Dam powerhouse.

DRAINAGE AREA. -- 167,800 sq mi, approximately.

PERIOD OF RECORD, -- Chemical analyses: October 1939 to September 1970. Water temperatures: October 1941 to September 1965.

REMARKS. --During period October to March samples were collected on or about the fifth, fifteenth, and twentyfifth of each month and composited for analysis; samples were collected monthly for the remainder of the water year. Records of specific conductance and temperature of individual samples available in district office, Tucson, Ariz,

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	OIS- SOLVED MAG- NE- STUM (MG) (MG/L)	SDDIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	SCDIUM PLUS PO- TAS- SIUM (NA+K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR+ BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIOE (CL) (MG/L)
ОСТ. 01-31	8504	10	93	32			107	169	0	312	94
NOV. 01-30	7154	9.6	78	40			111	174	0	312	93
DEC. 01-31	7374	10	80	40			113	177	0	315	95
JAN. 01-31	9799	9.3	92	34			116	167	0	332	99
FEB. 01-29	9644	9.2	90	34			116	1 64	o	330	98
MAR. 01-31	12250	9.0	90	33			117	163	0	329	98
APR. 21	19600	8.8	88	34	110	4.7		163	0	322	96
MAY 19	18400	6.3	85	33			108	1 40	6	312	94
JUNE 16	15300	8.6	90	33			110	1 65	0	316	96
JUL Y 21	15700	8,7	В9	34			106	168	0	306	94
17	19100	8.7	100	27			107	1 64	0	314	93
SEP. 21	10500	9.2	96	27			105	160	0	300	94
				ANALYSE	S OF ADDIT	IONAL SA	MPLES				
ОСТ. 23А	12790		94	29	105	5.2		167	0	310	99
NOV. 17A	10500		93	30	110	5.2		168	D	308	99
DEC.	8120		91	29	119	5.4		167	0	312	104
JAN. 20									_		
						5.5					
20	12100		91	34	114	5.5		160	0	318	104
DATE	DIS- SOLVED FLUC- RIDE (F) (MG/L)	NI TRATE (NO3) (MG/L)	PIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- QUE AT 180 C) (MG/L)	DIS- SOLVEC SOLIOS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIOS (TONS PER AC-FTI	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONA TE HARO- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH (UNITS)
DATE OCT. 01-31	DIS- SOLVED FLUC- RIDE (F)	NI FRATE (NO3)	DIS- SOLVED BORON (8)	DIS- SOLVED SOLIDS (RESI- QUE AT 180 C)	DIS- SOLVEC SOLIOS (SUM DE CONSTI- TUENTS)	DIS- SOL VED SOL 10S (TONS PER	HARD- NESS (CA, MG)	NON- CAR- BONA TE HARO- NESS	SODIUM AD~ SORP~ TION	SPECI- FIC COND- UCTANCE (MICRO-	РН
DATE OCT. 01-31 NOV. 01-30	DIS- SOLVED FLUC- RIDE (F)	NI [RATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- QUE AT 180 C) (MG/L)	DIS- SOLVEC SOLIOS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIOS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONA TE HARO- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31	DIS- SOLVED FLUC- RIDE (F) (MG/L)	N1 [RATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- QUE AT 180 C) (MG/L)	DIS- SOLVED SOLIOS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOL VED SOL 10S (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONA TE HARO- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
DATE OCT. 01-31 MOV. 01-30 DEC. 01-31 JAN. 01-31	DIS- SOLVED FLUC- RIDE (F) (MG/L)	NI FRATE (NO3) (MG/L) 2.5	PIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- QUE AT 180 C) (MG/L)	DIS- SOLVEC SOLIOS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOL VED SOL 10S (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L) 364	NON- CAR- BONA TE HARO- NESS (MG/L)	SODIUM AD~ SORP~ TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS) 8.1 7.7
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28	DIS- SOLVED FLUC- RIDE (F) (MG/L)	N( FRATE (NO3) (MG/L) 2.5	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- QUE AT 180 C) (MG/L)	DIS- SOLVEC SOLIOS (SUM OF CONSTI- TUENTS) (MG/L) 734 729	DIS- SOL VED SOL 10S (TONS PER AC-FT) 1.00 1.06	HARD- NESS (CA,MG) (MG/L) 364 360	NON-CAR-BONA TE HARO-NESS (MG/L)  226 21B	SODIUM AD- SORP- TION RATIO 2.4 2.5	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS) B.1 7.7 7.8
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31	DIS- SOLVED FLUC- RIDE (F) (MG/L)	NI FRATE (NO3) (MG/L) 2.5 3.0 3.3 1.2	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOL IDS (RESI- QUE AT 180 C) (MG/L)	DIS- SOLVEC SOLIOS (SUM OF CONSTI- TUENTS) (MG/L) 734 729 743	DIS- SOL VED SOL 10S (TONS PER AC-FT) 1.00 1.06 1.08	HARD- NESS (CA, HG) (MG/L) 364 360 364	NON-CAR-BONA TE HARO-NESS (MG/L)  226 218 219	SODIUM AD- SORP- TION RATIO 2.4 2.5 2.6	SPECI- FIC COND- UCTANCE (MICRO- MHOS) 1110 1140 1160	PH (UNITS) 8-1 7-7 7-8 7-6
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 21	OIS- SOLVED FLUC- RIDE (F) (MG/L)	NI FRATE (NO3) (MG/L)  2.5 3.0 3.3 1.2	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- QUE AT 180 C) (MG/L)	DIS- SOLVED SOLIOS (SUM OF CONSTI- TUENTS) (MG/L) 734 729 743 766	DIS- SOL VED SOL 10S (TONS PER AC-FTI 1.00 1.06 1.08	HARD- NESS (CA,MG) (MG/L) 364 360 364 370	NON- CAR- BONA TE HARO- NESS (MG/L) 226 218 219 233	SODIUM AD- SORP- TION RATIO 2.4 2.5 2.6 2.6	SPECI- FIC COND- UCTANCE (MICRO- MHOS) 1110 1140 1160 1180	PH (UNITS)  8-1  7-7  7-8  7-6
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 21 MAY.	01S- 50LVED FLUC- R10E (F) (MG/L)	NITRATE (NO3) (MG/L)  2.5  3.0  3.3  1.2  1.5  2.3	OIS- SOLVED BORON (B) (UG/L)	OIS- SOL VED SOL 10S (RES1- QUE AT 180 C) (MG/L)  782 797 810 791	DIS- SOLVED SOLIOS (SUM DI- CONSTI- TUENTS) (MG/L) 734 729 743 766 760	DIS- SOL VED SOL IOS (TONS PER AC-FTI 1.00 1.06 1.08 1.10	HARD- NESS (CA+MG) (MG/L) 364 360 364 370 364	NON- CAR- BONA TE HARO- NESS (MG/L) 226 218 219 233 230 228	SODIUM ADP- SORP- TION RATIO 2.4 2.5 2.6 2.6 2.6	SPECI- FIE COND- UCTANCE (MICRO- MHOS) 1110 1140 1160 1170	PH (UNITS) 8.1 7.7 7.8 7.6 7.6
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 21 MAY 19 JUNE	01S- 50LVED FLUC- R10E (F) (MG/L)	NE FRATE (NO3) (MG/L) 2.5 3.0 3.3 1.2 1.5 2.3	OIS- SOLVED BORON (B) (UG/L)	DIS- SOL VED SOL 105 (RES15- QUE AT 180 C1) (MG/L)  782 797 810 791 800	DIS- SOLVEC SOLIDS (SUM DS CONSTI- TURNTS) (MG/L) 734 729 743 766 760 758	DIS- SOL VED SOL 105 (TONS PER AC-FT1 1.00 1.06 1.08 1.10	HARD- NESS (CA, MG) (MG/L) 364 360 364 370 364 362	NON- CAR- BONA TE HARO- NESS (MG/L) 226 218 219 233 230 228	SODIUM AD- SORP- TION RATIO 2.4 2.5 2.6 2.6 2.7 2.5	SPECI- FIC COMO- UCTANCE (MICRO- MHOS) 1110 1140 1160 1170 1150	PH (UNITS) 8.1 7.7 7.8 7.6 7.6 7.6 8.1
DATE  OCT. 01-31  NOV. 01-30  DEC. 01-31  JAN. 01-31  FEB. 01-29  MAR. 21  MAY 19  JURE 16 JULY 21	01S- 50LVED FLUC- RIDE (F) (MG/L)	NEFRATE (NO3) (MG/L) 2.5 3.0 3.3 1.2 1.5 2.3 2.6 1.3	01S- \$0LVF0 80R0N (8) (UG/L)	DIS- SOLVED SOL 105 (AES15- QUE AT 180 C1) 180 C1) 782 797 810 791 800 801	DIS- SOLVEC SOLID OF CONSTI- TURNTS) (MG/L) 734 729 743 766 760 758	DIS- SOL VED SOL 10S (TGNS PER AC-FT) 1.00 1.06 1.08 1.10 1.08	HARD- NESS (CA+MG) (MG/L) 364 360 364 370 364 362 360	NON- CAR- BONA TE HARO- NESS (MG/L) 226 218 219 233 230 228 226 234	SODIUM AD- SORP- TION RATIO  2.4 2.5 2.6 2.6 2.7 2.5 2.5	SPECI- FIC COMO- UCTANCE (MICRO- MHOS) 1110 1140 1160 1170 1150 1150	PH (UNITS) 8.1 7.7 7.8 7.6 7.6 7.5 8.1 8.6
OATE  OCT. 01-31  MOV. 01-30  DEC. 01-31  JAN. 01-31  FEB. 01-29  MAR. 01-31  APR. 21  MAY  JUNE. JUNE. AUG. 17	01 S- 50 L VED FLUC- R 10E (F) (MG/L)	NITRATE (ND3) (MG/L) 2.5 3.0 3.3 1.2 1.5 2.3 2.6 1.3 2.7	01S- SOLVED BBROW (6) (UG/L)	DIS- SOL VED SOL 105 (RES)- QUE AT 130 C) (MG/L)  782 797 810 791 800 8C1 768	DIS- SOLVEC SOLIDO (SUM OF CONSTI- TUENTS) (MG/L) 734 729 743 766 760 758 747 715	DIS- SOL VED SOL 10S (TGNS PER AC-FT) 1.00 1.06 1.08 1.10 1.09 1.09	HARD- NESS (CA, MG) (MG/L) 364 360 364 370 364 362 360 348	NON- CAR- BONA TE HARO- NESS (MG/L) 226 218 219 233 230 228 226 234 227	SODIUM AD- SORP- TION RATIO  2.4  2.5  2.6  2.6  2.7  2.5  2.5	SPECI- FIC COND- UCIANCE (HICRO- MHOS) 1110 1140 1160 1170 1150 1150 1150 1150	PH (UNITS)  8.1  7.7  7.8  7.6  7.6  7.5  8.1  8.6  8.2  8.2
DATE  OCT.  O1-31  MOV.  O2-30  DEC.  JAN.  JULY  Z1  AUG.	Ots- Solved FLUC- RIOE (F) (MG/L)	NITRATE (NO3) (MO7L) 2.5 3.0 3.3 1.2 1.5 2.3 2.6 1.3 2.7 2.7	01S- SOLVED BORON (6) (6) (UG/L)	DIS- SOL VED SOL 105 (RES)- QUE AT 180 C) 180 C) 797 810 791 800 801 768 769 760 780	DIS- SOLVEE SOLIDE SOLIDE (SUM OF CONSTIT- TUENTS) (MG/L) 734 729 743 766 760 758 747 715 737 723 734 713	DIS- SOL VOS SOL VOS (TONS PER AC-FTI 1.00 1.06 1.08 1.10 1.09 1.09 1.09 1.04 1.05 1.03	HARD-NESS (CA, MG) (MG/L) (MG/	NON- CAR- BONA TE HARO- NESS (MG/L) 226 218 219 233 230 228 226 234 227 222	SODIUM AD- SORP- TION RATIO 2.4 2.5 2.6 2.6 2.7 2.5 2.5 2.5 2.5	SPECI- FIC COND- UCTANCE (HICRO- MHOS) 1110 1140 1160 1170 1150 1150 1150	PH (UNITS)  8.1  7.7  7.8  7.6  7.6  7.5  8.1  8.6  8.2  8.2
DATE  OCT.  O1-31  MOV.  O1-30  DEC.  O1-31  JAN.  O1-31  APR.  21  APR.  JULY  21  AUG.  17  SEP.	DIS- SOLVED FLUC- RIDE (F) (MG/L)	NITRATE (ND3) (MG/L) 2.5 3.0 3.3 1.2 1.5 2.3 2.6 1.3 2.7 2.8	01S- SOLVED BORON (6) (0) (10G/L)	DIS- SOL VED SOL 105 (RES)- QUE AT 180 C) 180 C) 797 810 791 800 801 768 769 760 780	DIS- SOLVEC SOLIDO (SUM OF CONSTI- TUENTS) (MG/L) 734 729 743 766 760 758 747 715 737 723	DIS- SOL VOS SOL VOS (TONS PER AC-FTI 1.00 1.06 1.08 1.10 1.09 1.09 1.09 1.04 1.05 1.03	HARD-NESS (CA, MG) (MG/L) (MG/	NON- CAR- BONA TE HARO- NESS (MG/L) 226 218 219 233 230 228 226 234 227 222	SODIUM AD- TION TION RATIO 2.4 2.5 2.6 2.6 2.7 2.5 2.5 2.5 2.5 2.5	SPECI- FIC COND- UCIANCE (HICRO- MHOS) 1110 1140 1160 1170 1150 1150 1150 1150	PH (UNITS)  8.1  7.7  7.8  7.6  7.6  7.5  8.1  8.6  8.2  8.2
DATE  OCT. 01-31  MOV. 01-30  DEC. 01-31  JAN. 31-31  FEB. 01-28  MAR. 21  MAY. 21  AUG. 17  SEP. 21  OCT.	DIS- SOLVED FLUC- RIDE (F) (MG/L)	NITRATE (ND3) (MG/L) 2.5 3.0 3.3 1.2 1.5 2.3 2.6 1.3 2.7 2.8	01S- SOLVED BORON (6) (0) (10G/L)	DIS- SOL VED SOL 105 (RES)- QUE AT 180 C) 180 C) 797 810 791 800 801 768 769 760 780	DIS- SOLVEE SOLIDE SOLIDE (SUM OF CONSTIT- TUENTS) (MG/L) 734 729 743 766 760 758 747 715 737 723 734 713	DIS- SOL VOS SOL VOS (TONS PER AC-FTI 1.00 1.06 1.08 1.10 1.09 1.09 1.09 1.04 1.05 1.03	HARD-NESS (CA, MG) (MG/L) (MG/	NON- CAR- BONA TE HARO- NESS (MG/L) 226 218 219 233 230 228 226 234 227 222	SODIUM AD- TION TION RATIO 2.4 2.5 2.6 2.6 2.7 2.5 2.5 2.5 2.5 2.5	SPECI- FIC COND- UCIANCE (HICRO- MHOS) 1110 1140 1160 1170 1150 1150 1150 1150	PH (UNITS)  8.1  7.7  7.8  7.6  7.6  7.5  8.1  8.6  8.2  8.2
DATE  OCT. 01-31  MOV. 01-30  DEC. 01-31  JAN. 31-50  E0. 28  MAR. 30  APR. 10  JULE 10  JULE 21  OCT. 23  NOV. 17	DIS- SOLVED FLUC- RIDE (F) (MG/L)	NITRATE (N03) (M07L) 2.5 3.0 3.3 1.2 1.5 2.3 2.6 1.3 2.7 2.8 3.0	DIS- SOLVED 80R0N (00 (00 / 10 / 10 / 10 / 10 / 10 / 10 /	DIS- SOL VED SOL 105 (AES1- 100 C1) (HG/L1)  782 797 810 791 800 801 768 769 760 780 715	DIS- SOLVEE SOLIDE SOLIDE (SUM OF CONSTIT- TUENTS) (MG/L) 734 729 743 766 760 758 747 715 737 723 734 713	DIS- SOL VED SOL IOS (TONS PER AC-FT)  1.00 1.06 1.08 1.10 1.08 1.09 1.09 1.04 1.05 1.03 1.06 .97	HARD- NESS (CA, MG) (MC/L) 364 360 364 362 360 348 362 360 362	NON- CAR- BONA TE HIGO- NESS (MG/L) 226 218 219 233 230 228 226 234 227 222 228	SODIUM APP- SORP- TIGN RATIO  2.4 2.5 2.6 2.6 2.7 2.5 2.5 2.5 2.4 2.5	SPECI- FIC COMD- UCIACE MICRO- MHOS) 1110 1140 1160 1170 1150 1150 1150 1150 1150	PH (UNITS)  8.1  7.7  7.8  7.6  7.6  7.5  8.1  8.6  8.2  8.2  8.2
DATE  OCT. OL-31 MOV. DEC. OL-31 JAN. OL-31 FEB. OL-28 MAR. OL-31 JUNE 10 JUNE 10 JUNE 10 OCT. 23 OCT.	01 S- SOLVED FLUC- R10E (F) (M67L)	NITRATE (103) (105/L) 2.5 3.0 3.3 1.2 1.5 2.3 2.6 1.3 2.7 2.7 2.8 3.0	DIS- SOLVED BORON (B) (UG/L)	DIS- SOL VED SOL 10S (RES1- QUE AT 180 C1 180 C1 180 C1 797 810 791 800 801 768 769 760 715 ANALLYSE	DIS- SOLVEC SOLIDO (SUM OF CONSTI) (WG/L) 734 729 743 766 760 758 747 715 737 723 734 713	DIS- SOL VED SOL IOS (TONS PER AC-FT) 1.00 1.06 1.08 1.09 1.09 1.04 1.05 1.03 1.06	HARD- NESS (CA, MG) (CA, MG) 364 360 364 362 360 348 362 360 362 360	NUN- CAR- BONA TE HARSO- NERSO (MG/L) 226 218 219 233 230 228 226 234 227 222 228 219	SODIUM AD- SOR- TION RATIO 2.4 2.5 2.6 2.6 2.7 2.5 2.5 2.5 2.5 2.5 2.5	SPECI- FIC COMD- UCIACE (MICRO- MHOS) 1110 1140 1180 1170 1150 1150 1150 1150 1150 1110	PH (UNITS)  8.1  7.7  7.8  7.6  7.6  7.5  8.1  9.6  8.2  8.2  8.2  8.0

A DISCHARGE AT TIME OF SAMPLING.

## 09423000 COLORADO RIVER BELOW DAVIS DAM, ARIZ.-NEV.

LOCATION. -- Lat 35°11'30", long 114°34'17", in SEINEI sec.1, T.32 S., R.66 E., Mount Diablo meridian, in Clark County, Nev., at gaging station on right bank, 0.5 mile downstream from Davis Dam, 29 miles west of Kingman, Ariz., and 68 miles downstream from Hoover Dam,

DRAINAGE AREA. -- 169,300 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: July 1969 to September 1970.

CHEMICAL ANALYSES, JULY 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
JULY 196	9								
31 OCT.	1520	19900	8.0	87	37	104	154	320	97
20	1530	10080	8.0	86	35	105	138	325	97
APR 1970									
30 JULY	1605	19890	6.0	87	35	116	156	340	93
16	1310		7.0	90	31	122	160	340	93
AUG.				,,	٠.			0.10	,,
20	1535	15570	8.0	87	32	119	158	335	93
SEP.									
15	1330		8.0	86	38	104	148	330	93
	DIS-	DIS-							
	SOLVED	SOLVED	DIS-		NON-	SODIUM	SPECI-		
	SOLIDS	SOLIDS	SOLVED		CAR-	AB-	FIC		
	(RESI-	(SUM OF	SOLIDS	HARD-	BONATE	SORP-	COND-		
	DUE AT	CONSTI-	(TONS	NE6S	HARD-	TION	UCTANCE	PH	TEMPER-
	180°C)	TUENTS)	PER	(CA, MG)	NESS	RATIO	(MICRO-		ATURE
BATE	(MG/L)	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)	(DEG C)
JULY 1969									
31		730	.99	370	244	2.4	1150	8.1	
očť		730	. 77	370	244	2,4	1150	8.1	19.0
20 APR 1970		725	.99	360	247	2,4	I 170	8.1	20.0
30	784	755	1.07	360	232	2.7	1180	8.1	15.0
JULY						/	1100	0.1	15.0
16 AUG.	776	763	1.06	350	219	2.8	1180	7,9	19.0
20	780	753	1.06	350	200	0.6			
SEP.		,03	1.00	330	220	2.8	1170	8.0	19.0
15	768	733	1,04	370	248	2.3	1150	8.1	21.0

## 09424000 COLORADO RIVER NEAR TOPOCK, ARIZ.

LOCATION. -- Lat 34°41'15", long 114°27'43", in SWiNWi sec.13, T.15 N., R.21 W., Gila and Salt meridian, Mohave County, at gaging station on left bank in Mohave Canyon, 2.7 miles downstream from Topock, 39.5 miles upstream from Parker Dam, and 49 miles downstream from Davis Dam.

DRAINAGE AREA. -- 172,300 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: August 1969 to September 1970. Water temperatures: July 1952 to July 1962.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
AUG 1969									
01 OCT.	1150	14800	8.0	87	35	111	150	325	99
16 MAY 1970	1100	8140	8.0	86	35	111	144	330	99
01	1005	15530	6.0	92	32	119	156	345	93
21	1305		6.0	87	35	113	158	335	91
JUNE			0.0	٠,	35		100	550	
16 JULY	0915		6.0	90	33	112	160	330	91
01		17170	7.0	92	29	119	160	335	92
AUG.									
20 SEP.	1015	12580	8.0	89	31	118	156	335	93
16	0810		9.0	84	33	117	150	335	90
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
AUG 1969		740	1.01	360	237		1150	7.9	20.0
OCT. 16		741	1.01	360	242	2.5	1170	8.1	22.0
MAY 1970									
01	804	765	1.09	360	232	2.7	1180	8.1	16.0
21	784	746	1.07	360	230	2.6	1180	7.9	18.0
JUNE									
16	788	742	1.07	360	229	2.6	1170	8.1	18.0
JULY 01	780	754	1.06	350	219	2.8	1180	8.1	19.0
AUG.	760	734	1.00	330	217	2.0	1160	0	.,.0
20	784	752	1.07	350	222	2.7	1160	7.9	19.0
SEP.	776	743	1.06	345	222	2,7	1150	8.0	20.0
16	//6	743	1.06	345	222	2./	1130	0.0	20.0

## DIVERSIONS FROM LAKE HAVASU

## 09424150 COLORADO RIVER AQUEDUCT NEAR PARKER DAM, ARIZ.-CALIF.

LOCATION. -- Lat 34°18'58", long 114°09'23", in NWiSWi sec.28, T.3 N., R.27 E., San Bernardino meridian, San Bernardino County, at gaging station at intake pumping plant of Metropolitan Water District of Southern California on Lake Havasu, 1.8 miles upstream from Parker Dam and 154 miles downstream from Hoover Dam.

PERIOD OF RECORD, -- Chemical analyses: October 1966 to September 1970.

REMARKS, -- Records furnished by California Department of Water Resources and reviewed by U.S. Geological Survey.

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)
QCI.		1670	23.3	8.0	85	32	108	5.0	143	0	315
NOV. 23	1045	1920		9.0	86	33	113	5.0	148	0	325
DEC.	1000	1640	13.3	9.0	87	33	113	4.0	144	2	325
JAN. 07		1670	10.6	9.0	87	34	116	5.0	145	2	333
FEB. 08		1860	10.0	6.0	85	33	116	5.0	142	0	328
MAR. 08		1390	13.9	8.0	87	33	116	4.0	150	1	329
AP9. 08		1750	17.2	9.0	89	34	112	4.0	146	2	331
MAY 06	0925	1790	20.0	7.0	92	33	113	4.0	151	2	332
OB		1790	26.7	9.0	85	34	111	5.0	137	2	333
AUG. 08		1730	28.9	9.0	83	34	112	4.0	129	2	328
SEP. 08		1700	26.7	9.0	82	34	112	5.0	134	0	33 L
DATE	CHLU- RIDE (GL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DIS+ SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TIDN RATIO	SPECI- FIC COND- UGTANCE (MICRO- MHOS)	PH (UNITS)
08	97	.4	1.0	723	3260	344	117	227	2.5	1150	8.2
NOV.	100	.5	1.1	746	3870	350	121	229	2.6	119D	8.3
08	100	.5	1.0	746	3300	353	121	232	2.6	1220	8.4
JAN. 07 FFR.	100	.5	1.4	760	3430	357	122	235	2.7	1180	8.4
08 MAR.	100	.4	1.3	745	3740	348	116	232	2.7	1200	8.2
08 APR.	98	.4	1.0	752	2820	353	125	228	2.7	1190	8.4
08	100	.3	1.2	755	3570	362	123	239	2.6	1230	8.5
06 JULY	98	.4	1.4	759	3670	365	127	238	2.6	1200	8.4
08											
AUG.	100	.5	1.3	749	3620	352	116	236	2.6	1160	8.4
	100 98	.5	1.3	749 735	3620 3430	352 347	116 109	236 238	2.6	1160 1110	8.4 8.4

## 09427520 COLORADO RIVER BELOW PARKER DAM, ARIZ.-CALIF.

LOCATION. -- Lat 34°17'44", long 114°08'22", in NWiNWi sec. 3, T. 2 N., R. 27 E., San Bernardino meridian, San Bernar-dino County, Calif., at gaging station on north end of powerplant at Parker Dam, 13 miles northeast of Parker, Ariz., and 14 miles upstream from Headgate Rock Dam.

DRAINAGE AREA. -- 178,000 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: October 1963 to September 1970. Water temperatures: February 1954 to September 1970 (discontinued).

#### EXTREMES .-- 1969-70:

Water temperatures: Maximum, 27.0°C on many days in August; minimum, 10.0°C on several days during January.

Period of record: Water temperatures: Maximum, 28.5°C Aug. 12, 13, 18, 1955; minimum (1954-65, 1966-70), 8.0°C Jan. 12, 1964.

REMARKS, -- Prior to October 1968, samples collected 3.9 miles downstream from Parker Dam. Formerly published as station 09428000.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

100	DATE UCT.	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (ÇA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	SODIUM PLUS PO- TAS- SIUM (NA+K) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CD3) (MG/L)	SULFATE (SO4) (MG/L)	CHLU- RIDE (CL) (MG/L)
18-0	24	4610		87	33	110		5.6	153	0	316	103
17.   4630	18	1840		90	33	119		5.8	159	0	322	168
JAN. 9300 9-6 89 34 117 5.9 159 0 327 102   Feb. 4990 90 34 114 5.9 159 0 322 101   Feb. 4990 8-8 89 34 118 8- 100 328 101   MAX.	0EL. 17	4630		90	33	117		5.8	156	0	320	109
1		9300	9.6	89			117		159	0	327	102
11   180	21					114		5.9	158			
11	11	1860	8.8	89	34		120		166	0	328	101
18700	11											
15   15.00     8-9   34   117     5.0   15.9   0   33.2   100	17											
14-04   14200   6-0   94   31     120     156   0   334   98	AP<.	18500		89	34	117		5.0	159	0	332	100
MAY	13A	14200		94	31				156		345	95
1780	MAY											
15	18											
15:0. 15:00 8.2 92 34 114 168 0 322 100  13 A 14:200 8.0 86 35 117 158 0 340 98  AU A 13100 7.0 89 31 115 156 0 323 98  10 A 13100 7.0 89 31 115 156 0 323 98  10 A 13100 7.0 86 35 114 156 0 323 98  10 A 10200 7.0 86 35 114 156 0 323 98  11 A 10200 7.0 86 35 113 156 0 323 98  12 1500 8.0 86 35 113 156 0 327 101  22 29.200 84 33 116 55.0 144 0 327 101  10.5 50LV5 50	08A	12300	6.0	92	32		120		162		340	95
1400   8.0	15	15500	8.2	92	34		114		168	Q	322	100
Note	13A	14200										
11500   9.3   100   76	AUG.	18700										
100   7.0   86   35     113     148     340   93	18											
DIS-  SILVED   SILVED   SOLIDS   SOLIDS   SOLVED   SOLIDS   SOLIDS   SOLVED   SOLIDS   SOLIDS   SOLIDS   SOLVED   SOLIDS   SOLI		10200	7.0	86	35		113		148		340	93
PIS-   SILVED   PIS-   SILVE	22	9200		84	33	116		5.0	141	0	327	101
NOV.  18.												
18	UATE	PIS- SULVED FLOO- RIDE (F)	(ND3)	SOLVEO BORUN (B)	SOLVED SDLIDS (RFSI- DUE AT 180 C)	DIS- SOLVED SULIDS (SUM OF CUASTI- TUENTS)	SOLVED SOLIDS (TONS PER	HARD- NESS (CA,MG)	CAR- BONATE HARD- NESS	SOOTUM AD- SORP- TION	SPECI- FIC CUND- UCTANÇE (MICRO-	РН
17	UATÉ UC1. 24	PIS- SULVED FLOO- RIDE (F)	(ND3) (MG/L)	SOLVEO BORUN (B) (UG/L)	SOLVED SDLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CUASTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	SDOIUM AD- SORP- TION RATIO	SPECI- FIC CUND- UCTANCE (MICRU- MHUS)	PH (UNITS)
02 1.0 768	DATE UC1. 24 NOV, 18	PIS- SULVED FLOO- RIDE (F)	(ND3) (MG/L)	SOLVEO BORUN (B) (UG/L)	SOLVED SDLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CUASTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	CAR- BONATE HARO- NESS (MG/L)	SOOTUM AD- SORP- TION RATIO	SPECI- FIC CUND- UCTANCE (MICRU- MHUS)	PH (UNITS)
FEB.  11 7.3 7- 765 1.04 362 226 2.7 1190 7.6  WAR.  11 7- 754 1.03 7- 1170  16 7- 768 761 1.04 360 229 2.7 1180 8.1  17 1.8 750 1.02 360 225 2.6 1170 8.3  APA.  07 6 2.2 160 782 1.06 362 237 2.7 1210 8.1  13 7- 784 769 1.07 360 232 2.7 1210 8.1  13 784 769 1.07 360 232 2.7 1190 8.1  20 3 2.0 190 822 767 1.12 368 234 2.6 1160 8.0  MAY  11 804 771 1.09 365 236 2.7 1200 8.1  16 1.8 702 755 1.08 370 235 2.5 1200 8.2  108  109  101  101  101  101  101  101	DATE DC1. 24 NOV, 18 DEC. 17	PIS- SULVED FLOO- RIDE (F)	(ND3) (MG/L)	SOLVEO BORUN (B) (UG/L)	SOLVED SDLIDS (RFSI- DUE AT 180 C) (MG/L) 764	DIS- SOLVED SOLIOS (SUM OF CUNSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT) 1.04	HARD- NESS (C4,MG) (MG/L) 354	CAR- BONATE HARO- NESS (MG/L) 228 231	SDOTUM AD- SORP- TION RATIO 2.5	SPECI- FIC CUMD- UCTANCE (MICRU- MHUS) 1170	PH (UNITS) 8.1 7.6
NAY  11 754	DATE UC1 24 NOV, 18 DEC 17 JAN.	PIS- SULVED FLUO- RIDE (F) (MG/L)	(ND3) (MG/L)   1.0	SOLVEO BORUN (B) (UG/L)	SOLVED SOLIDS (RFSI- DUE AT 180 C) (MS/L) 764 782 789	DIS- SOLVED SOLIOS (SUM OF CUNSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT) 1.04 1.06 1.07	HARD- NESS (CA,MG) (MG/L) 354 361 360	CAR-BONATF HARO-NESS (MG/L) 228 231 232	SDOTUM AD- SORP- TION RATIO 2.5 2.7 2.7	SPECI- FIC CUVD- UCTANCE (MICRU- MHUS) 1170 1160 1170	PH (UNITS) 8.1 7.6 7.7 8.1
11.	UATE UG1. 24 NOV, 18 DEC. 17 JAN. 02 21	PIS- SOLVED FLUO- RIDE (F) (MG/L)	(ND3) (MG/L)   1.0	SOLVEO BORUN (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 764 782 789	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PEQ AC-FT) 1.04 1.06 1.07	HARD- NESS (CA,MG) (MG/L) 354 361 360 362 364	CAR-BONATF HARO-NESS (MG/L) 228 231 232	SDOTUM AD- SORP- TION RATIO 2.5 2.7 2.7	SPECI- FIC CUVD- UCTANCE (MICRU- MHUS) 1170 1160 1170	PH (UNITS) 8.1 7.6 7.7 8.1
17.	DATE DG1. 24 NOV, 18 DEC. 17 JAN. 02 21 Feb. 11	PIS- SOLVED FLUO- RIDE (F) (MG/L)	(ND3) (MG/L)	SOLVEO BORUN (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 764 782 789	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PEQ AC-FT) 1.04 1.06 1.07	HARD- NESS (CA,MG) (MG/L) 354 361 360 362 364	CAR- BONATE HARD- NESS (MG/L) 228 231 232 232 234	SDOTUM AD- SORP- TION RATIO 2.5 2.7 2.7 2.7	SPECI - FIC CUND- UCTANCE (MICANCE (MIC	PH (UNITS) 8.1 7.6 7.7 8.1 8.1
07. 6	DATE UC1. 24 NOV, 18 DEC. 17 JAN. 02 21 Fed. 11 MAR.	01S- 5.JLVE0 FLU0- RIDE (F) (4G/L)	(ND3) (MG/L)	SOLVEO BORUN (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MS/L) 764 782 789  781	DIS- SOLVED SULIDS (SUM OF CUASTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT) 1.04 1.06 1.07 1.03 1.06 1.04	HARD- NESS (CA,MG) (MG/L) 354 361 360 362 364	CAR- BONATE HARO- NESS (MG/L) 228 231 232 232 234 226	SDOIUM AD- SORP- TION RATIO 2.5 2.7 2.7 2.7 2.6 2.7	SPECI- FIC GUND- UCTANCE (MICRU- MHUS) 1170 1160 1170 1190 1190	PH (UNITS) 8.1 7.6 7.7 8.1 8.1 7.6
NAY  11 804 771 1.09 368 234 2.6 1160 8.0  11 1.8 792 755 1.08 370 235 2.5 1200 8.1  12 1.8 792 755 1.08 370 235 2.5 1200 8.2  13 772 766 1.05 360 227 2.7 1200 8.0  15 2.1 796 755 1.08 368 230 2.6 1200 8.1  13 792 758 1.08 368 230 2.6 1200 8.1  13 792 758 1.08 360 230 2.7 1180 8.0  20 1.2 770 738 1.05 360 277 2.5 1180 7.8  AUS.  14 786 748 1.07 356 228 2.6 1170 8.0  14 1.0 786 748 1.07 356 228 2.6 1170 8.0	DATE DC1. 24 NDV, 18 DEC. JAN. 02 JAN. 11 NAR. 11 16	PIS- SJLVED FLUDH SIDE (F) (MG/L)	(ND3) (MG/L)	SOLVEO BORUN (B) (UG/L)	50LVED 50LIDS (RFS1- DUE AT 180 C) (MG/L) 764 782 789  781 754 768	015- SOLVED SULIOS (SUM OF CUASTI- TUENTS) (MG/L) 758 765	SOLVED SOLIDS (TONS PEQ AC-FT) 1.04 1.06 1.07 1.03 1.06 1.04	HARD- NESS (CA,MG) (MG/L) 354 361 360 362 364 362	CAR- BONATE HAROT- NESS (MG/L) 228 231 232 232 234 226	SDOIUM AD- SDRP- TION RATIO 2.5 2.7 2.7 2.6 2.7	SPECI- FIC CUMD- UCTANCE (MICRU- MHUS) 1170 1160 1170 1190 1190 1190	PH (UNITS) 8.1 7.6 7.7 8.1 7.4
11 804 771 1.09 365 236 2.7 1200 8.1 18 1.8 792 755 1.08 370 235 2.5 1200 8.2 JUNE 08 772 766 1.08 370 235 2.5 1200 8.2 JUNE 15 2.1 772 766 1.05 360 227 2.7 1200 8.2 JUNE 15 796 755 1.68 368 230 2.6 1200 8.1 JUNE 13 796 755 1.68 368 230 2.6 1200 8.1 JUNE 13 770 738 1.08 360 230 2.7 1180 8.0 26 770 738 1.05 360 777 2.5 1180 7.8 JUNE 15 770 738 1.05 360 230 2.7 1170 8.0 16 780 742 1.06 350 224 2.7 1170 8.0 16 780 742 1.06 350 228 2.6 1170 8.0 16 552P 786 748 1.07 356 228 2.6 1170 8.0	DATE UC1 24 NDV, 18 DEC 17 JAN 02 21 FEG 11 AQ 11 AQ 16 17	01S- SJLVED FLUDE 410E (F) (MG/L)	(ND3) (MG/L)	SOLVEO BORUN (B) (UG/L)	SOLVED SOLVED SOL INS (RFS1-DUE AT 180 C) (M3/L) 764 782 789 781 754 768	015- SOLVED SOLITOS CSUM OF CSU4511- TUENTS1 (MG/L) 758 761 750	SOL VEO SOL INS (10NS PEQ AC-FT) 1.04 1.06 1.07 1.03 1.06 1.04 1.03	HARN- NESS (CA,MG) (MG/L) 354 361 360 362 364 362 364 362 360	CAR- DONATE HARO- NESS (MG/L) 228 231 232 232 234 226 	SDOTUM AD- SDRP- TION RATIO  2.5 2.7 2.7 2.7 2.6	SPECI- FIC CUMD- UCTANCE (MICRJ- WHUS) 1170 1140 1140 1140 1140 1170	PH (UNITS) 8-1 7-6 7-7 8-1 8-1 7-6 8-1 8-3
18.	DATE UC1. 24. VDV, 18. 18. 17. JAN. 02. 21. FEtd. 11. AR2. 07. 13.11.	PIS- SJLVED FLUDG- 4IDE (F) (MG/L)	(ND3) (MG/L)	SOLVEO BORUM (B) (US/L)	SOLVED SOLVED SOLIDS (RFS1-DUE AT 180 C.) (MG/L) 764 782 789 781 754 768 782 784 768 768 768 768 768 768 768 768 768 768	015- 501 YED SULIOS (SUM OF CUMSTI- TUENTS) (Y67L) 758 765 760	SOLVEO SOLINS (TONS PER AC-FT) 1.04 1.06 1.07 1.03 1.04 1.02 1.06 1.07	HARD-NESS (Ca,PG) (MO/L) 354 361 360 362 364 360 360 360 360 360 360 360 360 360 360	CAR- BONATE HARO- '4ES' (MG/L) 228 231 232 234 226  229 225 237 232	SDOIUM AD- SDRP- TION RATIO  2.5 2.7 2.7 2.6 2.7 2.6 2.7 2.7 2.6	SPECI- FIC CUUD- UCTANCE (MICRU- PHUS) 1170 1160 1170 1190 1190 1170 1180 1170	PH (UNITS) 8.1 7.6 7.7 8.1 8.1 7.6 6.1 8.3 8.1
08 772 766 1.05 360 227 2.7 1200 8.0 15, 721 796 755 1.68 368 230 2.6 1200 8.1 JULY 13 792 758 1.08 360 230 2.7 1180 8.0 230 1.2 770 738 1.05 360 277 2.5 1180 7.8 AUG. 16 1.0 786 748 1.07 356 228 2.6 1150 7.6 5EP. 14 772 748 1.05 360 238 2.6 1170 8.0	UATE UC1. 24 VOV, 18 18 18 18 16 11 16 17 21 16 17 24 17 26 17 27 20 18 20 20 20	PIS- SJLVED FLUD- 4INE (F) (MG/L)	(ND3) (MG/L)	SOLVEO BORUN (B) (US/L)	SOLVED SOL INS (RFS1-DUE AT 180 C) (MS/L) 764 782 789 781 754 768 782 784 822	015- 501 VED SULIOS (SUM OF CUNSTI- TUENTS) (NG/L) (NG/L	SOLVEO SOLINS (TONS PEQ AC-FT) 1.04 1.06 1.07 1.03 1.04 1.02 1.06 1.07 1.12	HARD-NESS (CA-PG) (MO/L) 354 361 360 362 364 360 360 360 360 360 360 360 368	CAR- BONATE HARO- NESS (MG/L) 228 231 232 234 226 	SDOIUM AD- SOAP- TION RATIO  2.5 2.7 2.7 2.6 2.7 2.6 2.7 2.6 2.7 2.6 2.7 2.6	SPECI- FIC CUUD- UCTANCE (MICRU- PHUS) 1170 1160 1170 1190 1190 1170 1180 1170	PH (UNITS) 8-1 7-6 7-7 8-1 8-1 7-6 6-1 8-3 8-1 8-3
JULY 13 792 758 1.08 360 230 2.7 1180 8.0 20 1.2 770 738 1.05 360 777 2.5 1180 7.8 AUG. 10 780 747 1.06 350 224 2.7 1170 8.0 18 1.0 786 748 1.07 356 228 2.6 1150 7.6 5EP. 14 772 748 1.05 360 238 2.6 1170 8.0	UATE UC1. 24. NOV, 18. UEC. 17. JAN. 02. 21. FEG. 16. 16. 17. APA. APA. 20. 13. 14. 20. NAY 11. 18.	P1S- SJLVED FLUGE (F) (MG/L)        -	(ND3) (MG/L)   1.0  7.3  1.8 2.2	SOLVED BORUM (B) (UG/L)	SOLVED SOLVED SOL INS (RES1-DUE AT 180 C.) (MS/L) 764 782 789 781 754 768 782 784 822 804	015- 501/E00 SULIOS (SUM OF CUSSTI- 1UENTS) (MG/L) 758 761 750 760 750 750 750 750 750 750 750 750 750	SOLVEO SOLINS (TONS PER AC-FT) 1.04 1.06 1.07 1.09 1.06 1.04 1.02 1.06 1.07 1.12 1.06 1.07 1.12 1.06 1.07 1.12 1.09	HARD- NESS (C4+MG) (MG/L) 354 361 360 362 364 360 360 360 368 368	CAR- BONATE HARO- VESS (MG/L) 228 231 232 234 226  229 225 237 232 234 225	SDOIUM AD- SORP- TION RATIO  2.5 2.7 2.7 2.6 2.7 2.6 2.7 2.6 2.7 2.6 2.7 2.6 2.7 2.7 2.6 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7 2.7	SPECI- FIC CUMP- UCTANCE (MICRU- PHUS) 1170 1160 1170 1190 1190 1170 1180 1170 1180 1170	PH (UNITS) 8.1 7.6 7.7 8.1 8.1 7.4 8.1 8.3 8.1 8.1 8.0 8.0
13 702 758 1.08 360 230 2.7 180 8.0 20 1.2 770 738 1.05 360 277 2.5 180 7.8 16 1.2 780 742 1.06 350 224 2.7 1170 8.0 18 1.0 786 748 1.07 356 228 2.6 1170 7.6 5EP 772 748 1.05 360 238 2.6 1170 8.0	UATE UC1. 24. VOV, 18. UEC. 17. JAN. 02. 21. 48. 16. 16. 17. JAN. 16. 17. JAN. JOYN 18. JUNE 08.	01S- 53LVED 7LU0- 4IDE (F) (4G/L) 	(ND3) (NG/L)  1.0  7.3  1.8 2.2  2.0	SOLVEO BORUM (6) (UG/L)	SOLVED SOLVED SOLVEDS (AR S1-DUE AT 180 C) (MS/L) 764 782 784 781 754 768 822 804 792 7772	015- 501/E00 Sulflos (SUM OF CUSSTIS- TUESTS) (MG/L) 758 765 760 779 770 770 770 770 771	SOLVEO SOLINS (TONS PEQ AC-FT) 1.04 1.06 1.07 1.08 1.04 1.04 1.02 1.04 1.02 1.07 1.12	HARD- NESS (C4+PG) (T4PG) 354 361 360 362 362 360 360 360 368 368 368	CAR- BONATE HARO- RESS (MG/L) 228 231 232 234 226  229 225 234 236 236 235 236 236 237 236 237 238 239 239 240 250 250 250 260 270 270 270 270 270 270 270 27	SDOIUM AD- SORP- TION RATIO 2.5 2.7 2.7 2.6 2.7 2.6 2.7 2.7 2.6 2.7 2.7 2.6	SPECI- FIC CUMD- UCTANGE (MICRJ- MHUS) 1170 1140 1170 1190 1170 1180 1170 1180 1170 1180 1170	PH (UNITS) 8-1 7-6 7-7 8-1 8-1 7-9 8-1 8-3 8-1 8-0 8-1 8-0 8-1 8-2 8-2 8-0
AUS. 10 780 747 1.06 350 224 2.7 1170 8.0 10 1.0 786 748 1.07 356 228 2.6 1150 7.6 5EP. 14 772 748 1.05 360 238 2.6 1170 8.0	UATE UCI. 24. 17. 18. 02. 21. FEG. 11. 16. 17. APA. 17. APA. 11. 18. JUNF 08. 11. 18. JUNF 08.	01S- 53LVED 7LU0- 4LU0- 4LU0- (F) (4G/L) 	(ND3) (NG/L)  1.0  7.3  1.8 2.2  2.0	SOLVEO BORUM (6) (UG/L)	SOLVED SOLVED SOLVEDS (AR S1-DUE AT 180 C) (MS/L) 764 782 784 781 754 768 822 804 792 7772	015- 501/E00 Sulflos (SUM OF CUSSTIS- TUESTS) (MG/L) 758 765 760 779 770 770 770 770 771	SOLVEO SOLINS (TONS PEQ AC-FT) 1.04 1.06 1.07 1.08 1.04 1.04 1.02 1.04 1.02 1.07 1.12	HARD- NESS (C4+PG) (T4PG) 354 361 360 362 362 360 360 360 368 368 368	CAR- BONATE HARO- RESS (MG/L) 228 231 232 234 226  229 225 234 236 236 235 236 236 237 236 237 238 239 239 240 250 250 250 260 270 270 270 270 270 270 270 27	SDOIUM AD- SORP- TION RATIO 2.5 2.7 2.7 2.6 2.7 2.6 2.7 2.7 2.6 2.7 2.7 2.6	SPECI- FIC CUMD- UCTANGE (MICRJ- MHUS) 1170 1140 1170 1190 1170 1180 1170 1180 1170 1180 1170	PH (UNITS) 8-1 7-6 7-7 8-1 8-1 7-9 8-1 8-3 8-1 8-0 8-1 8-0 8-1 8-2 8-2 8-0
16 1.0 786 748 1,07 356 228 2.6 1150 7.6 5EP. 14 772 748 1.05 360 238 2.6 1170 8.0	UATE UC1. 24. 18. 100. 19. 20. 21. 21. 30. 21. 11. 16. 17. 4P2. 4P2. 13. 14. 18. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19	01S- 53LVED FLU00- 4IDE (F) (4G/L)	(ND3) (NG/L)   1.0  7.3  1.8  2.0	SOLVEO BORUM (B) (US/L)	SOLVED SOLVED SOLVEDS (RFS1-DUE AT 180 C) (MS/L) 764 782 789 781 754 768 782 784 822 804 792 772 796 792	015- 501 YED  SULIOS  (SUM OF CUSSTI- 10ENSTS  106/L)  758 761 750 764 750 764 755 758 758	SOLVEO SOLINS (TONS PER AC-FT)  1.04  1.06  1.07  1.03  1.04  1.03  1.04  1.02  1.06  1.07  1.12  1.09  1.08  1.05  1.08	HARD-NESS (C4+MG) (MG/L) 354 361 360 360 360 366 3770 360 368 360 360 368 360 360 368	CAR- BONATE HARO- NESS (MG/L)  228  231  232  234  226  229  225  237  232  234  236  235  236  235  237  236  236	SDOIUM AD- SORP- TION RATIO  2.5 2.7 2.7 2.6 2.7 2.7 2.6 2.7 2.7 2.6 2.7 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.6 2.7 2.5 2.7 2.6 2.7 2.5 2.7 2.6 2.7 2.6 2.7	SPECI- FIC CUMP- UCTANCE (MICRO) 1170 1160 1170 1190 1190 1190 1200 1200 1200 1200	PH (UNITS) 8.1 7.6 7.7 8.1 8.1 7.6 8.1 8.3 8.1 8.1 8.1 8.0 8.0 8.1 8.2
SEP. 14 772 748 1.05 360 238 2.6 1170 8.0	DATE UC1. 24 VIOV. 18 DEC. 11 20. 21 FEU. 11 16 17 20 13 JUNE 15 JUNE 15 JUNE 20 AUS	01S- 53LVED FLU00- FLU00- 4IDE (F) (4G/L)	(ND3) (NG/L)   1.0  7.3  1.8  2.0	SOLVEO BORUM (B) (US/L)	SOLVED SOLVED SOL INS (RF \$1-DUE AT 180 C) (MS/L) 764 782 789 781 754 768 782 784 822 804 792 770	015- 501/E00 SULIOS (SUM OF CUSTIS) (MG/L) 758 765 760 750 757 758 758 758 758 758	SOLVEO SOLINS (TONS PER AC-FT) 1.04 1.06 1.07 1.09 1.06 1.07 1.09 1.06 1.07 1.09 1.06 1.07 1.12 1.09 1.08 1.05 1.08 1.05	HARD-NESS (C4+MG) (MG/L) 354 361 360 360 366 3770 360 368 360 360 368 360 360 368	CAR- BONATE HARO- NESS (MG/L)  228  231  232  234  226  229  225  231  232  234  226  229  225  231  232  234  236  235  237  236  237  230  237	SDOIUM AD- SORP- TION RATIO  2.5 2.7 2.7 2.6 2.7 2.7 2.6 2.7 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.5	SPECI- FIE CUMD- UCTANCE (MICRU- PHUS) 1170 1160 1170 1190 1190 1190 1200 1200 1200 1200 1180 1180	PH (UNITS) 8.1 7.6 7.7 8.1 8.1 7.6 8.1 8.3 8.1 8.1 8.2 8.0 6.1 8.2
	UATE UCI. 24. 17. 18. 02. 21. FEG. 11. 16. 17. APA. 11. 18. UNF. 18. UNF. 18. UNF. UNF. UNF. UNF. UNF. UNF. UNF. UNF	015- 53LVED FLU00- FLU00- 4IDE (F) (4G/L)	(NO3) (NG/L)  1.0  7.3  1.8 2.2  2.0  1.8	SOLVEO BORUM (6) (UG/L)	SOLVED SO	015- 501/E00 Sut.105 (SUM OF CUASTI- 10ENTS) [MG/L] 758 765 761 770 770 770 771 775 776 776 776 776 777 777 777 777 777	SGLVEO SOLINS (TONS PER AC-FT)  1.04  1.06  1.07  1.03  1.04  1.03  1.04  1.02  1.06  1.07  1.08  1.08  1.09  1.08  1.05  1.08	HARD- NESS (C4+PG) (TMG/L) 354 361 360 362 362 360 362 360 368 365 370 368 368 368 368	CAR- BONATE HARO- AESS (MG/L)  228  231  232  234  226  229  225  234  236  236  236  237  230  237  230  237  230  237  230  237  230	SDOIUM AD- SORP- TION RATIO 2.5 2.7 2.7 2.6 2.7 2.7 2.6 2.7 2.7 2.6 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.7 2.6 2.7 2.5 2.7 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.5 2.7 2.5 2.7	SPECI- FIC CUMD- UCTANGE (MICRJ- MHUS) 1170 1160 1170 1190 1170 1190 1170 1180 1200 1200 1200 1200 1200	PH (UNITS) 8.1 7.6 7.7 8.1 8.1 7.4 8.1 8.3 8.1 8.1 8.1 8.1 8.1 8.1 8.1 8.0 8.1 8.0
	UATE UC1. 24 VOV, 18 UEC. 17 JAN. 02 21 *AR. 11 16 17 APZ. *APZ. *APZ. *AU. *AU. *AU. *AU. *AU. *AU. *AU. *AU	015- 53LVED FLU00- FLU00- 4IDE (F) (4G/L)	(NO3) (NG/L) 	SOLVEO BORUM (6) (UG/L)	SOLVED SOL VED SOL INS (RFS1-DUE AT 180 C) (MS/L) 764 782 789 761 754 768 762 782 784 792 770 786 786 782 784 782 784 785 785 785 785 785 785 785 785 785 785	015- 501/E00 Sullos (SUM OF CUNSTIS) (WSTIS) (WSTIS) (WG/L)  758 765 765 769 7711 755 758 758 778 778 778 778 778 778 778	SGLVEO SOLINS (TONS PER AC-FT)  1.04  1.06  1.07  1.03  1.04  1.03  1.04  1.02  1.06  1.07  1.09  1.08  1.08  1.08  1.08  1.08	HARD- NESS (C4+PG) (TMG/L) 354 361 360 362 362 360 362 368 365 370 368 369 369 369 369 369 369	CAR- BONATE HARO- AESS (MG/L)  228  231  232  234  226  227  239  216  231  236  237  227  230  230  237  227  228	SDOIUM AD- SORP- TION RATIO  2.5 2.7 2.7 2.6 2.7 2.7 2.6 2.7 2.7 2.6 2.7 2.6 2.7 2.6 2.7 2.6 2.7 2.6 2.7 2.6 2.7 2.6	SPECI- FIC CUMD- UCTANGE (MICRJ- MHUS) 1170 1180 1190 1190 1200 1200 1200 1200 1180 1180 1170 1180 1170 1190 1100 1200 1200 1200 1180 1180 1180 118	PH (UNITS) 8.1 7.6 7.7 8.1 8.1 7.4 8.1 8.3 8.1 8.1 8.0 8.1 8.1 8.0 7.6 8.1 8.1 8.0 8.1 8.0 8.1 8.0 8.1 8.0 8.1 8.0 8.1 8.0 8.1 8.0 8.0 7.6

A DAILY MEAN DISCHARGE.

## 09427520 COLORADO RIVER BELOW PARKER DAM, ARIZ.-CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	cc	TOBER	NOV	EMBER	DEC	EMBER	JAI	NUARY	FEB	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2 3 4 5			21.0 21.0 20.0 20.0 19.0	20.0 20.0 20.0 19.0 19.0	15.0 15.0 15.0 14.0 14.0	15.0 15.0 14.0 14.0 14.0	12.0 12.0 12.0 12.0 12.0	11.0 12.0 12.0 12.0 12.0	11.0 11.0 11.0 11.0	11.0 11.0 11.0 11.0	12.0 13.0 13.0 13.0 13.0	12.0 12.0 13.0 13.0
6 7 8 9	24.0 24.0 23.0 23.0	23.0 23.0 23.0 23.0 23.0	19.0 19.0 19.0 19.0 18.J	19.0 19.0 19.0 18.0 18.0	14.0 14.0 14.0 14.0 13.0	14.0 14.0 14.0 13.0 13.0	12.0 12.0 11.0 11.0	12.0 11.0 11.0 11.0	11.0 11.0 11.0 11.0	11.0 11.0 11.0 11.0	13.0 14.0 14.0 14.0 14.0	13.0 13.0 14.0 14.0
11 12 13 14 15	23.0 22.0 22.0 22.0 22.0	22.0 22.0 22.0 22.0 22.0	18.0 18.0 18.0	18.0 18.0 18.0	13.0 13.0 13.0 13.0	13.0 13.0 13.0 13.0	11.0 10.0 10.0 10.0	10.0 10.0 10.0 10.0	12.0 12.0 12.0 12.0 12.0	11.0 12.0 12.0 11.0	14.0 14.0 14.0 14.0 15.0	14.0 14.0 14.0 14.0
16 17 18 19 20	23.0 22.0 22.0 22.0 22.0	22.0 22.0 22.0 22.0 22.0			13.0 13.0 13.0 13.0	13.0 13.0 13.0 13.0	10.0 10.0 10.0 10.0	10.0 10.0 10.0 10.0	12.0 12.0 12.0 12.0 12.0	12.0 12.0 12.0 12.0 12.0	15.0 15.0 15.0 15.0 15.0	15.0 15.0 15.0 15.0
21 22 23 24 25	22.0 21.0 21.0 21.0 21.0	21.0 21.0 20.0 20.0 21.0			13.0 13.0 13.0 13.0	13.0 13.0 13.0 13.0	10.0 10.0 10.0 10.0	10.0 10.0 10.0 10.0	12.0 12.0 12.0 12.0 12.0	12.0 12.0 12.0 12.0	15.0 15.0 15.0 16.0	14.0 15.0 15.0 15.0
26 27 28 29 30 31	21.0 21.0 21.0 21.0 21.0 21.0	21.0 21.0 21.0 20.0 20.0 20.0			13.0 13.0 13.0 13.0 12.0	13.0 13.0 13.0 12.0 12.0	10.0 11.0 11.0 11.0 11.0	10.0 10.0 11.0 11.0 11.0	12.0 13.0 13.0	12.0 12.0 12.0	16.0 16.0 16.0 16.0 16.0	16.0 16.0 16.0 16.0 16.0
<b>MCNTH</b>	24.0	20.0			15.0	11.0	12.0	10.0	13.0	11.0	16.0	12.0
	A1	D D T 1		IAV	.11	INF	.0	II V	AUG	ust	SEPT	EMBER
DAY	AI Max	PRIL MIN	MAX	HAY MIN	J ( XAM	MIN	JU MAX	MIN	AUG	GUST MIN	SEPT Max	EMBER MIN
DAY 1 2 3 4 5												
1 2 3 4	MAX 16.0 16.0 16.0 16.0	MIN 16.0 16.0 16.0	MAX 18.9 18.0 18.0	MIN 18.0 18.0 18.0	MAX 24.0 24.0 24.0 23.0	MIN 23.0 23.0 23.0 23.0	MAX 25.0 24.0 24.0 25.0	MIN 24.0 24.0 24.0 24.0	MAX 26.0 26.0 26.0 26.0	MIN 26.0 26.0 26.0 26.0	MAX	MIN
1 2 3 4 5 6 7 8	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0	MIN 16.0 16.0 16.0 16.0 16.0 17.0 17.0	MAX 18.9 18.0 18.0 18.0 18.0 18.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0	MAX 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0	MIN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX 25.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 25.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0	MIN 26.0 26.0 26.0 26.0 27.0 27.0 27.0 26.0	MAX	MIN
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0	MIN 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0	MAX 18.9 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX 25.0 24.0 25.0 25.0 25.0 24.0 24.0 25.0 26.0 26.0 26.0 26.0	MIN 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 26.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 27.0 27.0	MIN 26.0 26.0 26.0 26.0 27.0 27.0 26.0 26.0 25.0 25.0 26.0 26.0	MAX	MIN
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	MAX 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0	HAX 18.9 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23	MIN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX 25.0 24.0 25.0 25.0 25.0 25.0 24.0 24.0 26.0 26.0 26.0 26.0 26.0 26.0 25.0 25.0	MIN 24-C 24-0 24-0 24-0 24-0 24-0 24-0 25-0 25-0 25-0 25-0 25-0 25-0 25-0 25	26.0 26.0 26.0 26.0 27.0 27.0 27.0 26.0 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 26.0 26.0 26.0 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MAX	MIN
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 12 20 22 23 24	MAX 16.0 16.0 16.0 17.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	MIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MIN 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 20.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	MAX 24.0 24.0 24.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0 24	MIN 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0	MAX 25.0 24.0 24.0 25.0 25.0 25.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MIN 24.C 24.0 24.0 24.0 24.0 24.0 24.0 25.0 25.0 25.0 25.0 25.0 25.0 24.0 24.0 24.0 24.0 24.0 24.0 24.0	MAX 26.0 26.0 26.0 27.0 27.0 27.0 26.0 26.0 27.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	MIN 26.0 26.0 26.0 26.0 27.0 27.0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26	MAX	MIN

09428500 COLORADO RIVER INDIAN RESERVATION MAIN CANAL NEAR PARKER, ARIZ.

LOCATION.--Lat 34°10'04", long 114°16'33", in SE¦NW¦ sec.31, T.10 N., R.19 W., Yuma County, in Colorado River Indian Reservation, at gaging station at Arizona end of Headgate Rock Dam, 1.7 miles northeast of Parker and 14 miles downstream from Parker Dam.

PERIOD OF RECORD. -- Chemical analyses: October 1969 to September 1970.

REMARKS. -- Unpublished miscellaneous chemical analyses for water years 1962-63 available in district office, Tucson, Ariz.

	TIME	DIS- Charge	DIS- SOLVED SILICA	DIS- SOLVED CAL- CIUM	DIS- SOLVED MAG- NE- SIUM	DIS- SOLVED SODIUM PLUS POTAS-	BICAR- BONATE	DIS- SOLVED SULFATE	DIS- SOLVED CHLO- RIDE
DATE	IIME	(CFS)	(\$102)	(CA)	(MG)	SIUM	(HC03)	(504)	(CL)
DHIE		(CF5)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)
OCT.									
20	1550		8.0	87	32	115	146	330	98
JAN.							- 10	•••	
15	1700		7.0	87	35	116	154	335	98
FEB.									
24	1540		6.0	94	31	118	156	340	95
MAR. 16	1430	800	7.0	89	32	106	***		
APR.	1430	800	7.0	89	32	106	160	310	93
13			6.0	92	32	118	160	340	94
MAY									
11			6.0	95	30	123	158	350	95
JUNE									
08	1100	975	6.0	90	33	118	160	340	94
JULY									
13	1600	1225	7.0	86	33	118	152	335	94
AUG.			,		-	•••	102	000	, 4
10	1315	1296	7.0	89	31	113	152	330	91
SEP.									
14	1700	1000	7.0	88	34	115	150	340	94
	DIS-	DIS-							
	SOLVED	SOLVED	DIS-		NON-	SODIUM	SPECI-		
	SOLIDS	SOLIDS	SOLVED		CAR-	AD-	FIC		
	SOLIDS (RESI-	SOLIDS (SUM OF	SOL VED SOL I DS	HARD-					
	SOLIDS (RESI- DUE AT	SOLIDS (SUM OF CONSTI-	SOLVED SOLIDS (TONS	NESS	CAR- BONATE HARD-	AD- SORP- Tion	FIC COND- UCTANCE	PH	TEMPER-
	SOLIDS (RESI- DUE AT 180°C)	SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	NESS (CA:MG)	CAR- BONATE HARD- NESS	AD- SORP-	FIC COND- UCTANCE (MICRO-		ATURE
DATE	SOLIDS (RESI- DUE AT	SOLIDS (SUM OF CONSTI-	SOLVED SOLIDS (TONS	NESS	CAR- BONATE HARD-	AD- SORP- Tion	FIC COND- UCTANCE	PH (UNITS)	
	SOLIDS (RESI- DUE AT 180°C)	SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	NESS (CA:MG)	CAR- BONATE HARD- NESS	AD- SORP- Tion	FIC COND- UCTANCE (MICRO-		ATURE
OCT.	SOLIDS (RESI- DUE AT 180°C)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
	SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	NESS (CA:MG)	CAR- BONATE HARD- NESS	AD- SORP- Tion	FIC COND- UCTANCE (MICRO-		ATURE
OCT. 20 JAN. 15	SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
OCT. 20 JAN. 15 FEB.	SOLIDS (RESI- DUE AT 180 °C) (MG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 743	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L) 350	CAR- BONATE HARD- NESS (MG/L) 230	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1170	(UNITS) 8.1 8.0	ATURE (DEG C) 20.0
OCT. 20 JAN. 15 FEB. 24	SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.1	ATURE (DEG C)
OCT. 20 JAN. 15 FEB. 24	SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 743 755	SOLVED SOLIDS (TONS PER AC-FT) 1.01 1.20	NESS (CA,MG) (MG/L) 350 360	CAR- BONATE HARD- NESS (MG/L) 230 234 232	AD- SORP- TION RATIO	FIC COMD- UCTANCE (MICRO- MHOS) 1170 1190	(UNITS) 8.1 8.0 8.1	ATURE (DEG C) 20.0  19.0
OCT. 20 JAN. 15 FEB. 24	SOLIDS (RESI- DUE AT 180 °C) (MG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 743	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L) 350	CAR- BONATE HARD- NESS (MG/L) 230	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1170	(UNITS) 8.1 8.0	ATURE (DEG C) 20.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR.	SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 743 755	SOLVED SOLIDS (TONS PER AC-FT) 1.01 1.20	NESS (CA,MG) (MG/L) 350 360	CAR- BONATE HARD- NESS (MG/L) 230 234 232	AD- SORP- TION RATIO	FIC COMD- UCTANCE (MICRO- MHOS) 1170 1190	(UNITS) 8.1 8.0 8.1	ATURE (DEG C) 20.0  19.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR. 13	SOLIDS (RESI- DUE AT 180 °C) (MG/L)  886 796 752	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 743 755 762 717	SOLVED SOLIDS (TONS PER AC-FT) 1.01 1.20 1.08 1.02 1.09	NESS (CA,MG) (MG/L)  350  360  360  355  360	CAR- BONATE HARD- NESS (MG/L) 230 234 232	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1170 1190 1190	8.1 8.0 8.1 8.1 8.1	ATURE (DEG C) 20.0 19.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR. 13 MAY	SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 743 755 762	SOLVED SOLIDS (TONS PER AC-FT) 1.01 1.20 1.08	NESS (CA+MG) (MG/L) 350 360 360 355	CAR- BONATE HARD- NESS (MG/L) 230 234 232	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1170 1190 1190	(UNITS) 8.1 8.0 8.1 8.1	ATURE (DEG C) 20.0 19.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR. 13 MAY 11 JUNE	SOLIDS (RESI- DUE AT 180 °C) (MG/L)  886 796 752 800	SOL IDS (SUM OF COMSTI- TUENTS) (MG/L) 743 755 762 717 762	SOLVED SOLIDS (TDNS PER AC-FT) 1.01 1.20 1.08 1.02 1.09	NESS (CA,MG) (MG/L)  350  360  360  355  360  360	CÁR- BONATE HARD- NESS (MG/L) 230 234 232 224 229 230	AD- SORP- TION RATIO 2.7 2.7 2.5 2.7 2.8	FIC COND- UCTANCE (MICRO- MHOS) 1170 1190 1190 1200	8.1 8.0 8.1 8.1 8.1 8.1	ATURE (DEG C)  20.0  19.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR. 13 MAY	SOLIDS (RESI- DUE AT 180 °C) (MG/L)  886 796 752	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 743 755 762 717	SOLVED SOLIDS (TONS PER AC-FT) 1.01 1.20 1.08 1.02 1.09	NESS (CA,MG) (MG/L)  350  360  360  355  360	CAR- BONATE HARD- NESS (MG/L) 230 234 232 224 229	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1170 1190 1190 1180	8.1 8.0 8.1 8.1 8.1	20.0 20.0  19.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR. 13 HAY 11 JUNE 08	SOLIDS (RESI- DUE AT 180 °C) (MG/L)  886 796 752 800	SOL IDS (SUM OF COMSTI- TUENTS) (MG/L) 743 755 762 717 762	SOLVED SOLIDS (TDNS PER AC-FT) 1.01 1.20 1.08 1.02 1.09	NESS (CA,MG) (MG/L)  350  360  360  355  360  360	CÁR- BONATE HARD- NESS (MG/L) 230 234 232 224 229 230	AD- SORP- TION RATIO 2.7 2.7 2.5 2.7 2.8	FIC COND- UCTANCE (MICRO- MHOS) 1170 1190 1190 1200	8.1 8.0 8.1 8.1 8.1 8.1	ATURE (DEG C)  20.0  19.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR. 13 MAY 11 JUNE	SOLIDS (RESI- DUE AT 180 °C) (MG/L)  886 796 752 800	SOL IDS (SUM OF COMSTI- TUENTS) (MG/L) 743 755 762 717 762	SOLVED SOLIDS (TDNS PER AC-FT) 1.01 1.20 1.08 1.02 1.09	NESS (CA,MG) (MG/L)  350  360  360  355  360  360	CÁR- BONATE HARD- NESS (MG/L) 230 234 232 224 229 230	AD- SORP- TION RATIO 2.7 2.7 2.5 2.7 2.8	FIC COND- UCTANCE (MICRO- MHOS) 1170 1190 1190 1200	8.1 8.0 8.1 8.1 8.1 8.1	ATURE (DEG C)  20.0  19.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR. 13 MAY 11 JUNE 08 JULY 13 AUG.	SOLIDS (RESI- DUE AT 180°C) (MG/L)  886 796 752 800 808 784	SOLIDS (SUM OF CONSTITUENTS) (MO/L) 743 755 762 717 762 778 761	SOLVED SOLIDS (TINS PER AC-FT)  1.01 1.20 1.08 1.02 1.09 1.10 1.07	NESS (CA,MG) (MG/L)  350  360  360  355  360  360  360	CÁR- BONATE HARD- NESS (MG/L) 230 234 232 224 229 230 229	AD- SORP- TION RATIO 2.7 2.7 2.5 2.7 2.8 2.7	COND- COND- UCTANCE (MICRO- MHOS) 1170 1190 1190 1200 1200	(UNITS) 8.1 8.0 8.1 8.1 8.1 8.1 8.1	ATURE (DEG C)  20.0  19.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR. 13 HAY 11 JUNE 08 JULY 13 AUG. 10	SOLIDS (RESITEDUE AT 180°C) (MG/L)  886 796 752 800 808	SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 743 755 762 717 762 778	SOLVED SOLIDS (TINS PER AC-FT)  1.01 1.20 1.08 1.02 1.09 1.10 1.07	NESS (CA,MG) (MG/L)  350  360  360  355  360  360  360	CÁR- BONATE HARD- NESS (MG/L) 230 234 232 224 229 230 229	AD- SORP- TION RATIO 2.7 2.7 2.5 2.7 2.8 2.7	COND- COND- UCTANCE (MICRO- MHOS) 1170 1190 1190 1200 1200	(UNITS) 8.1 8.0 8.1 8.1 8.1 8.1 8.1	ATURE (DEG C)  20.0  19.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR. 13 MAY 11 JUNE 08 JULY 13 AUG. 10 SEP.	SOLIDS (RESI- DUE AT 180°C) (MG/L)  886 796 752 800 808 784 784	SOLIDS (SUM OF CONSTI- TUENTS) (MO/L) 743 755 762 717 762 778 761 749	SOLVED SOLIDS (TONS PER AC-FT)  1.01 1.20 1.08 1.02 1.09 1.10 1.07	NESS (CA-MG) (MG/L) 350 360 360 360 360 360 355 360 350 350	CAR-BONATE HARD-NESS (MG/L) 230 234 232 224 229 230 229 226 226	AD- SORP- TION RATIO 2.7 2.7 2.5 2.7 2.8 2.7 2.7 2.6	FIG COND- COND- UCTANCE (MICRO- MHOS) 1170 1170 1190 1180 1200 1190 1180 1170	(UNITS) 8.1 8.0 8.1 8.1 8.1 8.1 8.0 8.0 8.0	ATURE (DEG C)  20.0  19.0
OCT. 20 JAN. 15 FEB. 24 MAR. 16 APR. 13 HAY 11 JUNE 08 JULY 13 AUG. 10	SOLIDS (RESI- DUE AT 180°C) (MG/L)  886 796 752 800 808 784	SOLIDS (SUM OF CONSTITUENTS) (MO/L) 743 755 762 717 762 778 761	SOLVED SOLIDS (TINS PER AC-FT)  1.01 1.20 1.08 1.02 1.09 1.10 1.07	NES (CA+MG) (MG/L) 350 360 360 360 360 360 360 360 360 360 36	CÁR- BÓNATE HARD- NESS (MG/L) 230 234 232 224 229 230 229 226	AD- SORP- TION RATIO  2.7 2.5 2.7 2.8 2.7 2.7	FIG COND- COND- UCTANCE (MICRO- MHOS) 1170 1170 1190 1180 1200 1190	(UNITS) 8.1 8.0 8.1 8.1 8.1 8.1 8.1	ATURE (DEG C)  20.0  19.0

09428510 POSTON WASTEWAY NEAR POSTON, ARIZ.

LOCATION.--Lat 33°59'58", long 114°26'41", in SW\28E\3 sec. 28, T.8 N., R.21 W., Yuma County, at gaging station 0.8 mile upstream from mouth, 2.5 miles west of Poston, and 14 miles southwest of Parker.

PERIOD OF RECORD, -- Chemical analyses: October 1968 to September 1970.

REMARKS. -- Unpublished miscellaneous chemical analyses for water years 1965-68 available in district office, Tucson, Ariz.

				DIS-	DIS- SOLVED	DIS- SOLVED			DIS-
			DIS-	SOLVED	MAG-	SODIUM		DIS-	SOLVED
			SOLVED	CAL-	NE-	PLUS	BICAR-	SOLVED	CHLO-
		DIS-	SILICA	CIUM	SIUM	POTAS-	BONATE	SULFATE	RIDE
	TIME	CHARGE	(\$102)	(CA)	(MG)	SIUM	(HCO3)	(804)	(CL)
DATE		(CFS)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)
OCT.			15						***
	1225		12	161	51 37	202	284	510 440	202
17	1400	1.4	16	119 142	49	178 211	200 260	510	152 192
22	1220		9.0	106	50	109	160	380	128
28	1100		11.	113	38	164	200	420	138
NOV.									
07	1425		15	142	45	168	260	425	178
14	1250		13	121	42	169	222	435	148
17	1245		10	105	41	139	178	390	128
28	1050		13	132	46	188	240	475	168
DEC.					•-				150
05	1325	151	13	124	49	158	216	445	152
12	1350		14 14	132	51 47	196 183	252 242	490 470	178 170
18 24	1645 1100		12	135 126	45	166	214	445	158
JAN.	1100		12	126	40	100	214	443	130
02	1535	1.2	13	119	47	162	220	450	138
09			11	121	46	170	228	445	148
15	1045		ii	105	41	149	192	400	128
23			20	167	57	239	316	580	218
FEB.									
06	1505		17	167	57	242	320	590	212
13	1635		15	138	50	207	256	535	165
20	1630		16	146	55	211	276	535	188
26	1510		11	118	45	155	220	430	134
MAR.									
06	1215		11	116	44	156	20 <b>8</b> 276	435	132
13 16	1210 1530		15 10	146 129	52 38	218 167	216	545 435	185 152
APR.	1530		10	124	38	16/	216	433	132
13			12	129	46	170	228	460	152
MAY			12	127	70	170	220	400	132
11			11	116	46	162	212	440	142
JUNE				•••	70		~	****	
08			9.0	111	40	155	204	420	122
JULY									
13			12	124	44	167	230	450	140
AUG.			_		-				
10			11	116	40	146	204	410	126
SEP.									
17			15	147	45	197	262	500	172

## 09428510 POSTON WASTEWAY NEAR POSTON, ARIZ .-- Continued

	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (TONS PER	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICCO-	РН	TEMPER
DATE	(MG/L)	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)	(DEG C)
DCT.									
02		1280	1.74	610	377	3.6	1960	7.9	
10		1040	1.41	450	286	3.7	1520	8.0	
17		1250	1.70	555	342		1840	7.9	26.0
22		862	1.17	470	339	2.2	1410	8,1	19.0
28		984	1.34	440	276	3,4	1490	7.9	20,0
NOV. 07	1180	1100	1.60	540	327		1790	7.9	21.0
	1120	1040	1.52		293		1590	7.9	19.0
14	1120	902	1.23	475 430	284	2.9	1400	8.1	14.0
28	1200	1140	1.63	520	323	2.9	1750	7.9	14.0
DEC.	1200	1140	1.63	520	323		1750	7.9	14.0
05	1100	1050	1.50	510	333		1610	8.1	16.0
12	1280	1190	1.74	540	334		1790	7.9	15.0
18	1210	1140	1.65	530	332		1740	8.1	15.0
24	1160	1060	1.58	500	324		1640	8,1	13.0
JAN.	1100	1000	1.50	300	324		1040	0,1	13.0
02	1100	1040	1.50	490	310	3.2	1600	8.0	
09	1130	1060	1.54	490	303	7.2	1630	7.9	10.0
15	996	930	1.35	430	272		1440	7.9	
23	1530	1440	2.08	650	391	4.1	2130	7.9	19.0
FEB.					• • • •				• • • • •
06	1570	1440	2.14	650	388	4.1	2170	8.0	
13	1290	1240	1.75	550	340		1810	7.9	
20	1380	1290	1.88	590	364	3.8	1950	7.9	
26	1030	1000	1.40	480	300	3.1	1570	7.9	
MAR.									
06	1070	998	1.46	470	300		1560	8.0	
13	1370	1300	1.86	580	354	3.9	1950	7.9	
16	1060	1040	1.44	480	303		1590	8,1	19.0
APR.									
13	1140	1080	1.55	510	323	3.3	1670	8.1	
MAY									
11	1080	1020	1.47	480	306	3.2	1590	8.1	
JUNE									
08	988	959	1,34	440	272	3.2	1480	7.8	
JULY									
13	1130	1050	1.54	490	302	3.3	1630	8.2	
AUG.									
10	1010	951	1.37	455	288	30	1470	8.0	
SEP.							4000		
17	1280	1210	1.74	550	335	3.6	1830	8.2	

#### 09429000 PALO VERDE CANAL NEAR BLYTHE, CALIF.

LOCATION.--Lat 33°43'54", long 114°30'43", in SE\nE\n\n\n\n\sec.19, T.5 S., R.24 E., San Bernardino meridian, Riverside County, at gaging station at canal intake structure on west side of Palo Verde Dam, 10 miles northeast of Blythe and 43 miles downstream from Headgate Rock Dam.

PERIOD OF RECORD. -- Chemical analyses: March to September 1970.

## CHEMICAL ANALYSES, MARCH TO SEPTEMBER 1970

DATE	TIME	DIS- SOLVED SILICA (\$102) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)
MAR.									
16	1400	6.0	89	34	121	160	345	95	778
APR.									
13		6.0	92	33	118	158	345	94	810
24	1350	6.0	94	32	115	156	340	95	796
MAY									010
11	0830	5.0	91	32	124	160	350	95	812
JUNE								95	792
08	0600	6.0	90	33	121	160	345	73	/72
JULY				35	116	152	340	95	808
13	1300	7.0	87	35	110	132	340	75	
AUG. 10	0840	8.0	88	33	117	152	340	93	796
SEP.	0040	0.0	00	30			•		
14	0830	7.0	90	35	119	158	350	96	800
	0000	,	, •	,,,					

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SOBIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
MAR.								
16 APR.	770	1.06	360	229	2.8	1190	8.1	14.5
13	767	1.10	365	236	2.7	1200	8.1	
24 May	760	1.08	365	237	2.6	1200	8.1	
11.,, JUNE	777	1.10	360	229	2.8	1210	8.1	18.0
08 JULY	770	1.08	360	229	2.8	1210	8.0	23.0
13 AUG.	756	1.10	360	236	2.7	1190	8.1	26.0
10 SEP.	755	1.08	355	230	2.7	1180	8,1	25.0
14	776	1.09	370	240	2.7	1190	8.1	22.0

09429030 PALO VERDE DRAIN NEAR PARKER, ARIZ.

LOCATION. -- Lat 33°45'25", long 114°29'48", in NE<sub>2</sub>SW<sub>2</sub> sec. 24, T.5 N., R. 22 W., Yuma County, at bridge 0.5 mile upstream from mouth, 0.5 mile northeast of Palo Verde Dam, 9 miles north of Ehrenberg, and 31 miles southwest of Parker.

PERIOD OF RECORD. -- Chemical analyses: October 1968 to September 1970.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available in district office, Tucson, Ariz.

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SD4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT.									
02	1030		16	127	45	166	208	430	172
10	1310		17	129	45	193	208	470	188
17	1445		16	130	44	183	208	450	188
22	1345		16	130	43	154	194	430	162
28	1315		17	130	45	165	212	440	168
NOV.									
07	1600		17	130	40	174	212	440	168
14	1500		19	134	40	173	214	445	168
19 28	1130 1230		19 17	130 134	43 40	167 165	216 212	435 435	165 165
DEC.	1230		17	134	40	100	212	433	163
05	1425		17	130	48	160	212	430	175
12	1500	26	17	130	48	161	202	445	172
18	1800		17	132	44	157	204	425	172
24	1140		18	129	43	154	200	425	162
JAN.									
02	1630		17	122	43	158	198	440	144
09	1220		16	130	40	161	210	435	152
15	1130		18	127	42	169	208	440	162
23	1545		17	127	40	168	208	435	158
FEB.									
06	1610		16	124	44	153	208	435	142
13	1710		19	122	43	153	208	430	138
20	1710		17	124	4.4	148	208	425	142
26	1555		17	124	44	151	208	430	143
MAR.							200	430	101
06	1255		17	126	43	147 154	208 208	428	136 142
13 16	1415 1625	19	18 17	124 119	41 42	161	216	425	142
APR.	1623	17	17	117	42	101	210	423	142
13			18	131	42	159	220	440	148
MAY			••	131	72	,		140	
11			18	129	43	169	220	445	158
JUNE									
08			17	132	44	170	222	450	162
JULY									
13			17	130	43	173	220	450	162
AUG.									
10			18	137	46	150	220	430	162
SEP.									
17			18	138	38	171	216	445	165

## 09429030 PALO VERDE DRAIN NEAR PARKER, ARIZ. -- Continued

	DIS-	DIS-							
	SOLVED	SOLVED	DIS-		NON-	SODIUM	SPECI-		
	SOLIDS	SOLIDS	SOLVED		CAR-	AD-	FIC		
	(RESI-	(SUM OF	SOLIDS	HARD-	BONATE	SORP-	COND-		
	DUE AT	CONSTI-	(TONS	NESS	HARD-	TION	UCTANCE	PH	TEMPER-
	180°C)	TUENTS)	PER	(CA,MG)	NESS	RATIO	(MICRO-		ATURE
DATE	(MG/L)	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)	(DEG C)
OCT.									
02		1060	1.44	500	330	3.2	1630	8.0	
10		1150	1.56	505	334	3.7	1690	8.2	
17		1120	1.52	505	334	3.5	1720	8.1	25.0
22		1030	1.40	500	341	3.0	1640	8.2	21.0
28	1050	1070	1.43	510	336	3.2	1600	8.1	19.0
NOV.									
07	1110	1080	1.51	490	316	3.4	1620	8.2	21.0
14	1070	1090	1.46	500	324	3.4	1610	8.2	20.0
19		1070	1.46	500	323	3.2	1630	8.1	14.0
28	1090	1060	1.48	500	326	3.2	1620	8.2	15.0
DEC.									
05	1130	1070	1.54	520	346	3.0	1640	8.1	17.0
12	1140	1070	1.55	520	354	3.1	1640	8.2	16.0
18	1110	1050	1.51	510	342	3.0	1610	8.2	
24	1170	1030	1.59	500	336	3.0	1600	8.1	13.0
JAN.									
02	1080	1020	1.47	480	318	3.1	1570	8.1	
09	1150	1040	1.56	490	318	3.2	1590	8.0	15.0
15	1170	1060	1.59	490	320	3.3	1610	7.8	
23	1110	1050	1.51	480	310	3.3	1580	7.9	17.0
FEB.									
06	1120	1020	1.52	490	320	3.0	1580	7.6	
13	1070	1010	1.46	480	310	3.0	1540	7.9	
20	1060	1000	1.44	490	320	2.9	1540	7.9	
26	1050	1010	1.43	490	320	3.0	1570	7.9	
MAR.									
06	1040	1000	1.41	490	320	2.9	1570	8.0	
13	1060	1010	1.44	480	310	3.1	1560	8.0	
16	1070	1010	1.46	470	293	3.2	1590	8.1	23.0
APR.									
13	1140	1050	1.55	500	320	3.1	1620	7.9	
MAY									
11	1120	1070	1.52	500	320	3.3	1640	8.0	
JUNE									
08	1170	1090	1.59	510	328	3.3	1680	7.9	
JULY									
13	1130	1080	1.54	500	320	3.4	1650	8.2	
AUG.									
10	1120	1050	1.52	530	350	2.8	1640	8.1	
SEP.								_	
17	1140	1080	1.55	500	323	3.3	1660	8.2	

09429060 LOWER MAIN DRAIN NEAR PARKER, ARIZ.

LOCATION. --Lat 33°45'40", long 114°29'05", in SWiNWi sec. 19, T.5 N., R.21 W., Yuma County, at gaging station 2.8 miles upstream from outlet to Colorado River and 31 miles south of Parker.

PERIOD OF RECORD. -- Chemical analyses: October 1968 to September 1970.

REMARKS. -- Unpublished miscellaneous chemical analyses for water years 1962-68 available in district office, Tucson, Artz.

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT. 02	1045		13	146	57	260	248	520	298
10	1255		14	143	51	282	240	560	282
17	1435		12	138	54	247	244	490	278
22	1335		13	127	52	202	210	470	218
28	1255		14	148	51	273	256	530	292
NOV. 07	1550		14	156	49	250	260	475	302
14	1450		14	140	49	250	246	495	268
19	1435		16	145	58	260	260	525	288
28	1130		11	129	48	210	222	460	225
DEC.								_	
05	1415	202	14	154	55	280	264 220	545 480	308 238
11 18	1715 1745	202	14 14	134 145	52 48	214 247	248	510	238 258
24	1130		13	129	48	228	226	490	228
JAN.	1100		••	•	70			4.0	220
02	1615		12	129	48	205	228	475	202
09	1210		12	143	52	25 <b>5</b>	256	520	265
15	1115 1530		12 19	122 185	45 68	208 394	218 324	460 690	202 435
23 FEB.	1530		14	185	68	374	324	690	433
06	1555		16	182	67	397	308	700	435
13	1700		11	124	49	206	224	470	202
20	1700		12	132	49	208	232	475	212
26 Mar.	1545		11	135	47	225	240	490	222
06	1240		13	137	5 <b>5</b>	235	252	515	240
13	1405		13	138	52	243	252	520	242
16	1630	198	12	143	54	237	256	510	252
APR.									
I3			11	135	49	219	236	490	222
11			11	132	49	233	232	505	228
JUNE				132	77	203	202	505	220
08			11	134	52	246	248	520	242
JULY									
13			15	166	60	318	282	610	345
AUG. 10			13	145	51	251	244	525	262
SEP.				143	31	231	244	323	202
17			15	153	51	266	254	530	290
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.									
02		1420	1.93	600	396	4.6	2210	8.0	
10		1450 1340	1.97	565 565	368 365	5.2 4.5	2150 2130	8.1 8.0	24.0
17 22		1190	1.62	530	358	3.8	1940	7.9	20.0
28	1520	1440	2.07	580	370	4.9	2250	8.0	20.0
NOV.									
07	1460	1380	1.99	590	377	4.5	2290	8.0	21.0
14 19	1420	1340 1420	1.93	550 600	348 387	4.6 4.6	2100 2220	8.0 8.1	20.0 14.0
28	1250	1190	1.70	520	338	4.0	1890	8.1	14.0
DEC.				020			•		
05	1500	1490	2.04	610	394	4.9	2300	8.1	16.0
11	1270	1240	1.73	550	370	4.0	1930	8.0	15.0
18	1430 1330	1350 1250	1.94	560	356 334	4.5 4.4	2070 1910	8.2 8.1	13.0
24 JAN.	1330	1250	1.81	520	334	4.4	1410	8.1	13.0
02	1310	1180	1.78	520	333	3.9	1890	8.1	
09	1510	1380	2.05	570	360	4.6	2160	8.1	11.0
15	1250	1160	1.70	490	311	4.1	1780	8.0	
23	2040	1950	2.77	740	474	6.3	2980	8.0	18.0
FEB. 06	2090	1950	2.84	730	478	6.4	3040	7.9	
13	1320	1170	1.80	510	326	4.0	1850	8.0	
20	1270	1200	1.73	530	340	3.9	1890	8.0	
26	1290	1250	1.75	530	333	4.3	1960	8.0	
MAR.	1460	1320		570	364	4.3	2090	8.0	
06	1460	1320	1.99	5/0	304	4.3	2070	5.0	

## 09429188 COLORADO RIVER AT TAYLOR FERRY, CALIF.

LOCATION.--Lat 33°26'03", long 114°37'35", in SE\understand sec.36, T.8 S., R.22 E., San Bernardino meridian, Riverside
County, at gaging station at site of old Taylor Ferry, 2.5 miles upstream from Cibola Bridge, 12 miles south
of Blythe, Calif., 28 miles downstream from Pale Verde diversion dam, and 62 miles upstream from Imperial Dam.

DRAINAGE AREA. -- 183,700 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: April to September 1970.

DIS-

REMARKS .-- Gaging station operated by Bureau of Reclamation.

#### CHEMICAL ANALYSES, APRIL TO SEPTEMBER 1970

DATE	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG/L'	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)
APR.								
13 MAY	6.0	90	37	127	164	360	101	840
11	6.0	95	35	127	166	360	103	840
JUNE								
08	7.0	92	38	126	168	360	104	836
JULY 13	7.0	90	37	130	164	360	106	830
AUG.	7.0	70		150	104	300	100	0.50
10	8.0	90	35	126	162	350	105	824
SEP.								
17	8.0	97	35	126	160	360	109	840

	SOLVED	DIS-		NON-	SODIUM	SPECI-	
	SOLIDS	SOLVED		CAR-	AD-	FIC	
	(SUM OF	SOLIDS	HARD-	BONATE	SORP-	COND-	
	CONSTI-	(TONS	NESS	HARD-	TION	UCTANCE	PH
	TUENTS)	PER	(CA,MG)	NESS	RATIO	(MICRO-	
DATE	(MG/L)	AC-FT)	(MG/L)	(MG/I,)		MHOS)	(UNITS)
APR.							
13	803	1.14	375	240	2.8	1240	8.0
MAY							
11	809	1.14	380	244	2.8	1260	8.1
JUNE							
08	811	1.14	385	247	2.8	1270	8.0
JULY							
13	812	1,13	375	240	2.9	1260	8.0
AUG. (							
10	795	1.12	370	237	2.9	1240	8.0
SEP.							
17	815	1.14	385	254	2.8	1260	8.2

09429220 OUTFALL DRAIN NEAR PALO VERDE, CALIF.

LOCATION.--Lat 33°21'41", long 114°43'20", in SE¡SE¡ sec. 26, T.9 S., R.21 E., San Bernardino meridian, Imperial County, at gaging station at bridge on State Highway 78, 3.3 miles upstream from mouth and 5 miles south of Palo Verde.

PERIOD OF RECORD, -- Chemical analyses: October 1968 to September 1970.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available in district office, Tucson, Ariz.

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (S102) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
ост.									
01	1320		16	138	52	449	312	580	480
10	1115		17	142	45	442	300	620	432
17	0910		16	137	48	448	312	610	442
24	1100		18	146	57	440	324	610	465
31	1800		17	137	51	432	312	600	432
NOV.									
07	1400		17	145	43	406	312	515	448
13	1805		19	140	46	459	316	600	465
21	1255		21	142	55	471	340	625	478
26	1330		17	140	46	460	316	615	455
DEC.									
04	1520		18	140	46	451	318	595	455
10	1520		18	137	51	440	310	600	445
19	1215		18	143	49	462	316	625	465
24	1235		19	145	48	492	324	640	495
JAN.									
09	1405		19	148	49	505	334	655	505
15	1315		24	146	55	542	344	690	545
23	1215		17	135	49	436	300	605	435
FEB.									
06	1210		17	137	48	436	308	615	422
13	1250		19	135	47	420	304	595	408
19	1420		17	142	45	420	308	600	408
26	1430		17	142	50	434	320	615	426
MAR.									
06	1505		18	132	54	421	312	610	408
13	0945		19	145	53	470	326	645	470
16	1100	530	17	140	49	445	326	625	425
APR.									005
13			17	135	47	392	300	570	385
MAY			4-			440	240		
11 JUNE			17	125	55	410	310	610	385
08				400		000	244	570	385
			17	133	51	393	316	5/0	365
JULY 13			17	140	46	403	320	600	375
AUG.			1/	140	40	403	320	600	3/3
10			19	135	49	390	308	570	385
SEP.			47	133	77	370	306	370	303
17			18	148	45	411	322	590	405
17			10	140	7.0	411	322	370	703

# TRIBUTARIES BETWEEN PALO VERDE DAM AND IMPERIAL DAM 09429220 OUTFALL DRAIN NEAR PALO VERDE, CALIF.--Continued CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	DIS-	DIS-							
	SOLVED	SOLVED	DIS-		NON-	SODIUM	SPECI-		
	SOLIDS	SOLIDS	SOLVED		CAR-	AD-	FIC		
	(RESI-	(SUM OF	SOLIDS	HARD-	BONATE	SORP-	COND-		
	DUE AT	CONSTI-	(TONS	NESS	HARD-	TION	UCTANCE	PH	TEMPER-
	180°C)	TUENTS)	PER	(CA,MG)	NESS	RATIO	(MICRO-		ATURE
DATE	(MG/L)	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)	(DEG C)
OCT.									
01		1870	2.54	560	304	8.3	2960	8.1	26.0
10		1850	2.52	540	294	8.3	2850	8.1	24.0
17		1860	2.53	540	284	8.4	2930	8.0	23.0
24		1900	2.58	600	334	7.8	2970	8.1	21.0
31		1820	2.48	550	294	8.0	2880	8.1	21.0
NOV.									
07		1730	2.35	540	284	7.6	2920	8.1	21.0
13		1890	2.57	540	281	8.6	2970	8.0	21.0
21		1960	2.67	580	301	8.5	3130	8.1	17.0
26 DEC.	1920	1890	2.61	540	281	8.6	3020	8.2	18.0
04	1930	1860	2.62	540	279	8.5	2950	8.1	19.0
10	1760	1850	2.39	550	296	8.1	2880	8.2	17.0
19	1980	1920	2.69	560	301	8.5	3040	8.2	
24	2000	2000	2.72	560	294	9.0	3130	8.2	17.0
JAN.									
09	2140	2050	2.91	570	296	9.2	3260	8.0	
15	2210	2170	3.01	590	308	9.7	3410	7.9	
23	1940	1830	2.64	540	294	8.2	2900	8.0	
FEB.									
06	1960	1830	2.67	540	288	8.2	2920	8.0	
13	1960	1780	2.67	530	280		2850	8.0	
19	1890	1790	2.57	540	288	7.9	2870	8.1	
26	1860	1840	2.53	560	298	8.0	2950	8.1	
MAR.									
06	1940	1800	2.64	550	294	7.8	2860	8.0	
13	2100	1960	2.86	580	312	8.5	3130	8.0	
16	1930	1860	2.62	550	282	8.2	2970	8.1	17.0
APR.	1000	4700		E00	204		0700		
13 May	1820	1700	2.48	530	284	7.4	2730	8.1	
11	1880	1760	2.56	540	286	7.7	2870	8.2	
JUNE	1000	1700	2.30	340	200	,.,	2070	0.2	
08	1820	1710	2.48	540	281	7.3	2760	8.1	
JULY	1020	1710	2.40	340	201	7.5	2700	0.1	
13	1840	1740	2.50	540	278	7.6	2780	8.2	
AUG.				• • • •		,	2,00		
10	1830	1700	2.49	540	288	7.3	2770	8.2	
SEP.									
17	1890	1780	2.57	555	291	7.6	2860	8.2	

09429225 ANDERSON DRAIN NEAR PALO VERDE, CALIF.

LOCATION. -- Lat 33°21'19", long 114°43'00", in SW1 sec.36, T.9 S., R.21 E., San Bernardino meridian, Imperial County, 0.1 mile upstream from pump into Outfall Drain and 5.5 miles south of Palo Verde.

PERIOD OF RECORD. --Chemical analyses: October 1968 to September 1969 (partial records), October 1969 to September 1970.

REMARKS. -- Unpublished miscellaneous chemical analyses for water years 1966-68 available in district office, Tucson, Ariz.

DATE	TIME	DIS- CHARGE (CFS)	DIS- SBLVED SILICA (SIO2) (MG/L)	DIS- SOLVEB CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SOBIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCD3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
DEC.									
19	1445		20	218	125	2040	576	1580	2390
JAN. 16	1330		26	326	172	3150	640	2200	3940
MAR.	1330		26	320	1/2	3130	040	2200	3740
27	1100		26	330	179	3210	636-	2280	4010
APR.									
13	1100	10	16	170	72	1170	452	1080	1260
MAY									
12			20	210	106	2120	608	1640	2380
JUNE									
10	1035		22	198	94	1770	610	1480	1910
30	1130		24	238	118	2550	644	2000	2850
AUG. 25	1005		27	150	79	1360	628	1280	1460
SEP.	1005		21	130	,,	1550	020	1200	. 400
24	1340		20	202	96	2220	656	1670	2440
	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (TONS PER	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO-	РН	TEMPER- ATURE
DATE	(MG/L)	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)	(DEG C)
DEC.	7050		0.50	1010	Eco	27	10400	7.8	
19 JAN.	7050	6660	9.59	1060	588	27	10400	7.0	
16	10800	10100	14.7	1520	995	35	15700	7.8	
MAR.									
27	10900	10400	14.8	1560	1040	35	15600	7.9	
APR.	4100	2000	F 10	720	250		4000	7.9	
13	4180	3990	5.68	720	350	19	6390	7.7	
MAY									
12									
	7100	6780	9.66	960	462	30	10500	8.0	
JUNE									
JUNE 10	6070	5780	8.26	880	380	26	9040	7.9	23.0
JUNE 10 30									
JUNE 10 30 AUG.	6070 8360	5780 8100	8.26 11.4	880 1 <b>0</b> 80	380 552	26 34	9040 12300	7.9 8.2	23.0 26.0
JUNE 10 30	6070	5780	8.26	880	380	26	9040	7.9	23.0
JUNE 10 30 AUG. 25	6070 8360	5780 8100	8.26 11.4	880 1 <b>0</b> 80	380 552	26 34	9040 12300	7.9 8.2	23.0 26.0

## 09429300 COLORADO RIVER BELOW CIBOLA VALLEY, ARIZ.

LOCATION.--Lat 33°13'16", long 114°40'18", in NE\{\frac{1}{2}\seta \frac{1}{2}\seta \frac{1

DRAINAGE AREA.--183,800 sq mi, approximately.

PERIOD OF RECORD, --Chemical analyses: January to September 1969 (partial records), October 1969 to September 1970. Water temperatures: March 1956 to December 1966.

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT.									
09 DEC.			~	92	37		164	~	128
22 JAN.	1230	45( 0	٠-	98	38		182	~-	151
13	1105		9.0	92	37	144	168	365	125
FEB. 12	1400	310	9.0	97	36	167	186	385	142
MAR. 16	1000	103/0	7.0	90	38	134	172	355	115
APR. 13			6.0	93	36	137	168	365	114
24	1030	9440	6.0	92	34	128	164	- 355	103
MAY 11 JUNE	0950		7.0	92	34	127	164	350	105
08			7.0	94	35	143	176	370	115
13	~-		8.0	94	35	158	176	380	131
22 AUG.	0555		7.0	92	32	127	162	350	99
10 SEP.	1115	<b>96</b> 50	7.0	90	35	124	156	355	101
17	0855		9.0	102	33	157	178	375	138
18	0055		9.0	92	33	126	158	350	104
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOL DS (SUM OF CONS'I- TUEN'S) (MG'L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SGDIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
QCT.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOL TED SOL DS (SUM OF CONSTI- TUEN 'S) (MG'L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND~ UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
OCT. 09 DEC.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOL DS (SUM OF CONS'I- TUEN'S) (MG'L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.0	ATURE (DEG C)
OCT. 09 DEC. 22 JAN.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOL DS (SUM OF CONS''I- TUEN'S) (MG'L)	SOLVED SOLIDS (TONS PER AC-FT) 1.26	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L) 246	AD- SORP- TION RATIO	FIC COND~ UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
OCT. 09 DEC. 22 JAN. 13	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOL DS (SUM OF CONS'I- TUEN'S) (MG'L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.0	ATURE (DEG C)
OCT. 09 DEC. 22 JAN. 13 FEB. 12	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOL DS (SUM OF CONS''I- TUEN'S) (MG'L)	SOLVED SOLIDS (TONS PER AC-FT) 1.26	NESS (CA,MG) (MG/L) 380 400	CAR- BONATE HARD- NESS (MG/L) 246	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1330	9.0 8.0	ATURE (DEG C)
OCT. 09 DEC. 22 JAN. 13 FEB.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 928	SOLVED SOL DS (SUM OF CONSTI- TUEN 'S) (MG'L) 798 376	SOLVED SOLIDS (TONS PER AC-FT) 1.26 1.19	NESS (CA,MG) (MG/L) 380 400 380	CAR- BONATE HARD- NESS (MG/L) 246 251 242	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1330 1460	8.0 8.0 8.0	ATURE (DEG C)
OCT. 09 DEC. 22 JAN. 13 FEB. 12 MAR. 16 APR.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 928  940 988 860 876	SOL UED SOL DS SOL DS (SUM OF COMS: I- TUEN 'S) (MG 'L) 798 376 356 729 325	SOLVED SOLIDS (TONS PER AC-FT) 1.26 1.19 1.28 1.34 1.17	NESS (CA,MG) (MG/L) 380 400 380 390 380	CAR- BONATE HARD- NESS (MG/L) 246 251 242 238 239 242	AD- SORP- TION RATIO 3.2 3.7 30	FIC COND- UCTANCE (MICRO- MHOS) 1330 1460 1340 1470 1320	8.0 8.0 8.0 8.1 8.1 8.1	ATURE (DEG C)
OCT. 09 DEC. 22 JAN. 13 FEB. 12 MAR. 16 APR.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 928  940 988 860	SOL UED SOL DS (SUM OF COMS"I- TUEN 'S) (MG 'L) 798 376 356 729	SOLVED SOLIDS (TONS PER AC-FT) 1.26 1.19 1.28 1.34	NESS (CA,MG) (MG/L) 380 400 380 390 380	CAR- BONATE HARD- NESS (MG/L) 246 251 242 238 239	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 1330 1460 1340 1470	8.0 8.0 8.0 8.0 8.1 8.1	ATURE (DEG C)
OCT. 09 DEC. 22 JAN. 13 FEB. 12 MAR. 13 APR. 13 24 MAY 11 JUNE	SOL VED SOL IDS (RESI-DUE AT 130°C) (MG/L)  928 940 988 860 876 848	SOL POS SOL DOS (SUM OF COMS*11- TUEN '5) (MG'L) 798 376 326 327 325 335 300 797	SOLVED SOLIDS (TONS PER AC-FT)  1.26 1.19 1.28 1.34 1.17 1.19 1.15	NESS (CA.MG) (MG/L) 380 400 380 390 380 370 370	CAR- BONATE HARD- NESS (MG/L) 246 251 242 239 239 242 236 236	AD- SORP- TION RATIO 3.2 3.7 30 3.1 2.9 2.9	COND- UCTANCE (MICRO- MHOS) 1330 1460 1340 1470 1320 1300 1250	9.0 9.0 8.0 8.1 8.1 8.0 9.1	ATURE (DEG C)
OCT. 09 DEC. 22 JAN. 13 FEB. 12 MAR. 16 APR. 24 MAY 11 JUNE 08 JULY	SOL VED SOL IDS (RESI-DUE AT 180°C) (MG/L)  928 940 988 860 876 848 874	SOL UPD SOL DB (SUM OF CONS"11-TUEN 'S) (MG'L) 198 376 356 729 325 335 300 797	SOLVED SOLIDS (TONS PER AC-FT)  1.26 1.17 1.28 1.34 1.17 1.19 1.15 1.19	NESS (CA,MG) (MG/L) 380 400 380 390 380 370 380 380	CAR- BONATE HARD- NESS (MG/L) 246 251 242 238 239 242 236 236	AD- SORP- TION RATIO 3.2 3.7 30 3.1 2.9 2.9	COMD- COMD- UCTANCE (MICRO- MHOS) 1330 1460 1340 1470 1320 1350 1250 1250	(UNITS)  8.0  8.0  8.0  9.1  8.1  8.0  8.1  7.9	ATURE (DEG C)
OCT. 09 DEC. 22 JAN. 13 FEB. 12 MAR. 16 APR. 13 24 MAY 11 JUNE 08 JULY 13	SOL VED SOL TIPS (RESIDUE AT 190°C) (MG/L)  928 940 938 860 876 848 874 900 928	SOL UPD SOL DB (SUM OF CONS'11-TUEN'S) (MO'L) 178 376 356 729 325 335 300 797 852 894	SOLVED SOLIDS (TONS PER AC-FT)  1.26 1.19 1.28 1.34 1.17 1.19 1.15 1.19 1.22	NESS (CA+MG) (M6/L)  380  400  380  390  380  370  380  380  370	CAR- BONATE POPULATION OF THE	3.2 3.7 30 3.1 2.9 2.9 3.5	COND- COND- UCTANCE (MICRO- MHOS) 1330 1460 1340 1470 1320 1300 1250 1250 1350	(UNITS)  8.0  8.0  8.1  8.1  8.1  7.9	ATURE (DEG C)
OCT. 09 DEC. 22 JAN. 13 FEB. 12 MAR. 16 APR. 24 MAY 11 JUNE 08 JULY 13	SOL VED SOL IDS (RESI-DUE AT 180°C) (MG/L)  928 940 988 860 876 848 874	SOL UPD SOL DB (SUM OF CONS"11-TUEN 'S) (MG'L) 198 376 356 729 325 335 300 797	SOLVED SOLIDS (TONS PER AC-FT)  1.26 1.17 1.28 1.34 1.17 1.19 1.15 1.19	NESS (CA,MG) (MG/L) 380 400 380 390 380 370 380 380	CAR- BONATE HARD- NESS (MG/L) 246 251 242 238 239 242 236 236	AD- SORP- TION RATIO 3.2 3.7 30 3.1 2.9 2.9	COMD- COMD- UCTANCE (MICRO- MHOS) 1330 1460 1340 1470 1320 1350 1250 1250	(UNITS)  8.0  8.0  8.0  9.1  8.1  8.0  8.1  7.9	ATURE (DEG C)
OCT. 09 DEC. 22 JAN. 13 13 12 MAR. 16 APR. 13 24 MAY 11 JUNE 08 JULY 13 22 AUG. 10 SEP.	SOL VED SOL TO S	SOL UED SOL DES (SUM OF CONS'IT O	SOLVED SOLIUS (TONS PER AC-FT)  1.26 1.19 1.28 1.34 1.17 1.19 1.15 1.19 1.22 1.26 1.10 1.13	NESS (CA+MG) (MG/L) 380 400 380 380 370 380 360 370	CAR- BONATE HARD- NESS (MG/L) 246 251 242 239 242 236 236 236 236 236 237 242	3.2 3.7 30 3.1 2.9 2.9 3.5 2.9 2.8	FILE COMD- COMD- COMD- UCTANCE (MICRO- MHOS)  1330  1460 1340 1470 1320 1320 1250 1250 1250 1250 1250 1250 1250 12	(UNITS)  8.0  8.0  8.1  8.1  8.1  7.9	ATURE (DEG C)
OCT.  09 DEC. 22 JAN. 13 FEB. 12 MAR. 14 MAPR. 13 24 MAY MAY 11 JUNE 00 JULY 13 22 AUG.	SOL VED SOL TO S	SOL UPD SOL DBS (SUM OF CONS'11-TUEN'S) (MO'L) 798 376 356 729 325 335 300 797 852 894 788	SOLVED SOLIUS (TONS PER AC-FT)  1.26 1.19 1.28 1.34 1.17 1.15 1.19 1.22 1.26 1.10	NESS (CA+MG/L) 380 400 380 390 380 380 370 370 380 380 380	CAR- BONATE HARD- NESS (MG/L) 246 251 242 239 242 236 236 236 236 236 236 236 237	3.2 3.7 30 3.1 2.9 2.9 3.5 2.9	FILE COMB- COMD- COMD- UCTANCE (MICRO- MHOS)  1330  1460 1340 1470 1320 1320 1250 1250 1250 1410 1220	(UNITS)  8.0  8.0  8.1  8.1  8.0  7.9  7.9  8.1	ATURE (DEG C)

#### 09429500 COLORADO RIVER AT IMPERIAL DAM, ARIZ. -CALIF.

LOCATION. --Lat 32°53'29", long 114°27'57", in NW 18W 1 sec. 9, T.15 S., R.24 E., San Bernardino meridian, Imperial County, Calif., at gaging station near All-Americal Canal headworks at west end of Imperial Dam, 5 miles upstream from Laguna Dam, 15 miles northeast of Yuma, 90 miles downstream from Palo Verde Dam, and 147 miles downstream from Parker Dam.

DRAINAGE AREA. -- 184,600 sq mi, approximately.

PERIOD OF RECORD, -- Chemical analyses: August 1969 to September 1970.

REMARKS, --Stream discharges reported with analyses represent total flow reaching Imperial Dam. Daily specific conductance record furnished by Bureau of Reclamation.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIG2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCG3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SD4) (MG/L)
AUG 1969											
25 SEP.	1215	7740		93	33	148		5.5	170	0	348
19 OCT.	1025	5069		98	37	162		5.7	190	0	364
20 NOV.	1015	5180		100	36	154		6.1	186	0	366
19	1445	1370		92	43	200		6.5	181	0	400
DEC. 18	1130	5290		98	36	162		5.8	178	0	370
JAN 1970 22 FEB.	1100	4100		102	36	160		6.0	187	0	366
18 MAR.	0945	4440		99	39	164		5.8	183	0	372
18	1100	9450		96	36	140		6.0	174	0	354
20	1230		8.0	91	40		139		172	0	370
APR. 13			7.0	92	37		141		170	0	365
23	1515	6190	7.0	100	34	136		5.5	175	ŏ	360
MAY		0170			٠.			•••		_	
11	1230		7.0	96	40		150		176	0	390
20 JUNE	1115	7370		9 <b>9</b>	36	148		5.7	172	0	362
09	1230		8.0	95	37		152		178	0	380
18	1130	7400		98	35	146		5.7	170	ŏ	366
JULY											
13	1230		8.0	94	37		151		174	o	375
23	1100	8520		96	35	148		5.6	169	0	364
AUG. 10	1230		9.0	96	35		154		176	0	375
19	1330	7850	7.0	94	32	144		5.3	160	ŏ	352
SEP.		. 050						0.0		·	
14	1230		9.0	95	37		153		168	0	385
23	1330	5940		97	35	150		5.5	168	0	372

		DIS-	DIS-								
	DIS-	SOLVED	SOLVED	pis-		NON-	SODIUM	SPECI-			
	SOLVED	SOLIDS	SOLIDS	SOLVED		CAR-	AD-	FIC			
	CHLO-	(RESI-	(SUM OF	SOLIDS	HARD-	BONATE	SORP-	COND-			
	RIDE	DUE AT	CONSTI-	(TONS	NESS	HARD~	TION	UCTANCE	PH	TEMPER-	
	(CL)	180°C)	TUENTS)	PER	(CA,MG)	NESS	RATIO	(MILRO-		ATURE	
BATE	(MG/L)	(MG/L)	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)	(DEG C)	
AUG 1969											
25	129	864		1.18	368	229	3.4	1340	7.9	30.0	
SEP.											
19	155	973		1.32	398	242	3.5	1470	7.9	27.0	
OCT.	4=0	o= /									
20 NOV.	152	956		1.30	398	245	3.4	1420	8.0	19.0	
19	202	1070		1.46		257		1610			
DEC.	202	10/0		1.40	406	237	4.3	1810	8.0	14.5	
18	152	962		1.31	394	248	3.6	1410	8.0	13.0	
JAN 1970	102	,02		1.51	374	240	3.0	1410	5.0	13.0	
22	157	979		1.33	404	251	3.5	1440	7.9	13.0	
FEB.	,	,		1.50	404	231	3.3	1440	,.,	13.0	
18	163	980		1.33	408	258	3.5	1480	7.8	15.5	
MAR.											
18	130	886		1.20	388	245	3.1	1340	7.6	16.5	
20	118	872	852	1.19	390	249	3.1	1340	8.1		
APR.											
13	119	890	846	1.21	380	240	3.1	1330	8.1		
23	132	902		1.23	390	246	3.0	1360	8.0	19.0	
MAY											
11	128	936	899	1.27	405	260	3.2	1400	8.1		
20	140	913		1.24	394	253	3.2	1380	8.0	25.5	
JUNE 09	128	936									
18	128	936	889	1.27	390 388	244 248	3.4 3.2	1400 1400	8.1 8.1	26.0 26.5	
JULY	137	412		1.24	388	248	3.2	1400	8.1	20.5	
13	128	928	880	1.26	385	242	3.3	1390	8.1	30.0	
23	135	912		1.24	384	245	3.3	1380	8.1	29.5	
AUG.		/1-		3124	504	240	3.0	1000	0	-/	
10	131	944	888	1.28	385	240	3.4	1390	8.1	31.0	
19	130	863		1.17	366	235	3.3	1300	8.0	31.0	
SEP.										•	
14	131	932	894	1.27	390	252	3.4	1390	8.2	28.0	
23	138	926		1.26	386	249	3.3	1400	8.2	25.5	

COLORADO RIVER MAIN STEM

## 09429500 COLORADO RIVER AT IMPERIAL DAM, ARIZ.-CALIF.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	31		INDUC I AIRCE	( ) I Cit Cit Cit II I	A	-> -> ->	TER TERRY	ocropen z				
DAY	DCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	1460	1560	1490	1480	1280	1310	1380	1400	1300	1380	1360
ž	1360	1470	1480	1470	1480	1290	1300	1390	1390	1370	1360	1350
3	1370	1460	1480	1400	1440	1260	1310	1420	1390	1380	1380	1370
4	1360	1440	1480	1400	1440	1320	1310	1380	1370	1360	1360	1400
5	1370	1420	1480	1380	1420	1390	1310	1340	1400	1380	1320	1440
-	22.0		2			-2.0						
6	1360	1420	1510	1380	1380	1500	1320	1340	1390	1370	1330	1400
7	1370	1400	1570	1380	1390	1470	1320	1370	1400	1320	1320	1420
8	1370	1410	1660	1370	1400	1440	1310	1360	1350	1340	1380	1400
9	1370	1430	1600	1380	1380	1480	1320	1400	1370	1360	1400	1370
10	1350	1440	1510	1380	1390	1480	1310	1430	1380	1380	1370	1360
11	1360	1430	1480	1400	1370	1470	1320	1380	1380	1360	1370	1320
12	1350	1420	1470	1410	1360	1350	1310	1350	1370	1360	1370	1350
13	1350	1440	1510	1420	1400	1370	1310	1360	1380	1370	1360	1370
14	1360	1550	1490	1390	1500	1400	1320	1360	1380	1350	1390	1360
15	1370	1600	1470	1380	1500	1400	1350	1350	1360	1340	1380	1360
16	1380	1640	1440	1390	1550	1380	1320	1360	1400	1350	1390	1370
17	1400	1680	1430	1420	1560	1320	1350	1360	1360	1370	1380	1340
18	1400	1680	1470	1460	1440	1320	1360	1340	1380	1370	1340	1350
19	1420	1660	1450	1500	1440	1330	1370	1340	1380	1360	1280	1380
20	1420	1680	1450	1450	1370	1330	1350	1320	1390	1310	1300	1380
21	1390	1880	1450	1490	1370	1320	1340	1320	1380	1340	1380	1380
22	1370	1710	1460	1480	1350	1300	1350	1380	1320	1320	1360	1380
23	1380	1740	1480	1450	1350	1320	1340	1390	1360	1350	1360	1380
24	1410	1770	1490	1480	1300	1300	1360	1390	1350	1400	1350	1340
25	1460	1650	1550	1470	1310	1310	1380	1390	1360	1390	1360	1390
							2					
26	1460	1590	1590	1480	1290	1310	1350	1380	1370	1380	1340	1410
27	1470	1620	1460	1440	1290	1300	1340	1380	1380	1350	1370	1430
28	1430	1550	1460	1440	1290	1330	1340	1380	1360	1360	1300	1410
29	1390	1460	1480	1420		1320	1340	1400	1360	1360	1420	1380
30	1410	1500	1490	1420		1300	1350	1440	1380	1360	1420	1350
31	1420	~	1500	1460		1310		1420		1390	1380	
AVG	1390	1550	1500	1430	1400	1350	1330	1370	1370	1360	1360	1380

## 09429690 COLORADO RIVER ABOVE GILA RIVER, NEAR YUMA, ARIZ.

LOCATION.--Lat 32°43'22", long 114°32'46", in SEINEI sec. 19, T.8 S., R.22 W., Yuma County, on left bank 0.6 mile upstream from Gila River, 5 miles east of Yuma, 9 miles downstream from Laguna Dam, 12 miles upstream from northerly international boundary, and 14 miles downstream from Imperial Dam.

DATE	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	OIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	BIS- SOLVEJ CHLO RIDE (CL) (MB/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)
ect.								
06 13	12	105 106	43 40	194	208 208	410	188 182	
20		105	38		198		178	
27 NOV.		103	40		180		178	~~
03	14	113	53	226	256	450	222	~-
10		103	37		196		172	~ -
17 24		110 127	43 45		220		198	
DEC.		127	45		262		242	
01	14	121	43	240	248	440	242	1180
08 15	15	127 122	59 50	236	252 250	450	225 248	
22	14	132	46	274	250	465	292	1410
29	19	150	48	299	306	500	318	1460
JAN.								
05 12	18 16	134 119	45 42	271 227	272 248	470 435	282 218	1400 1240
19	15	137	48	244	276	470	252	1240
26	15	126	43	224	252	440	222	1370
FEB. 02	12							
09	13	116 117	44 41	206 214	240 236	425 430	198 202	1220 1230
12	9.0	95	36	156	180	375	132	968
16	12	116	41	197	228	425	184	1150
25 MAR.	13	110	40	201	212	415	192	1110
09	11	105	43	175	212	415	152	1150
16	12	110	38	195	212	420	172	1080
23 30	11 11	105 110	41 38	170 184	202	395 395	158	1050
APR.		110	30	104	214	373	172	1080
06	10 10	110	38	182	204	405	168	1070
13 20	10	111	40	163	208	400	148	1060
27	11	114	37 38	166 195	204 214	380 420	158 178	1070 1120
MAY								
04	9.0	105	35	171	192	395	148	1020
11	10 12	105 111	38 42	174 185	200 212	400 410	155 178	1030 1130
25	11	111	41	176	210	410	162	1100
JUNE			_					
01 08	10 12	101	37 41	172 193	194 216	395 420	148 178	1000 1140
15	12	111	41	189	218	420	170	1130
22	10	105	40	176	204	410	152	1080
29 JULY	12	105	40	184	202	420	158	1070
06	11	105	40	179	200	415	155	1060
13	11	105	37	167	198	395	145	1040
20	11	108	37	174	204	400	152	1040
27 AUG.	10	98	32	163	170	380	138	950
03	11	103	36	172	194	400	152	1060
10	12	78	38	156	182	385	135	968
17	11	103	37	178	202	400	152	1060
24 31	13 12	108 106	39 40	171 174	202 204	405 400	152 160	1070 1070
SEP.		100	70	1/7	204	400	100	1070
08	13	113	38	191	220	415	172	1120
21	13 12	110	40 36	188 184	216 206	415 410	170 162	1100
28	14	112	36 39	184	206	410 425	172	1140
					'			

## 09429690 COLORADO RIVER ABOVE GILA RIVER, NEAR YUMA, ARIZ. -- Continued

DRAINAGE AREA. --185,000 sq mi, approximately.
PERIOD OF RECORD. --Chemical analyses: October 1968 to September 1970.
REMARKS. --Unpublished chemical analyses for water years 1961-68 available in district office, Tucson, Ariz.

DATE	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-F1)	HARD- NESS (CA,MG) (MG/L)	NON- CAP- DONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
001.							
06	1060	1.44	440	270	4.0	1590	8.1
13			430	260		1620	8.1
20			420	258		1570	8.1
27			420	272		1580	8.1
NOV.	1210	=	500	290		1900	
03 10	1210	1.65	410	250 250	4.4	1560	8.1 8.2
17			450	270		1710	8.1
24			500	285		1960	7.9
DEC.							
01	1220	1.60	480	276	4.8	1940	8.0
08	4050	. ==	560	354		1860	8.0
15 22	1250 1360	1.70	510 520	305 300	4.5 5.2	1950 2170	8.1 8.1
29	1490	1.99	579	319	5.4	2330	8.1
JAN.		••••	37.9	2.7	2.4	2300	٠
05	1360	1.90	520	297	5.2	2140	8.1
12	1180	1.69	470	266	4.6	1830	8.1
19	1300	1.71	540	314	4.6	2070	8.1
26 FEB.	1200	1.86	490	284	4.4	1860	8.1
02	1120	1.66	470	273	4.1	1810	8.1
09	1140	1.67	460	266	4.3	1790	8.1
12	893	1.32	385	238	3.5	1420	8.0
16	1090	1.56	460	273	4.0	1730	8.0
25	1080	1.51	440	266	4.2	1660	8.0
MAR.							
09	1010 1050	1.56	440	266	3.6	1610 1640	9.1 8.1
16 23	981	1.47	430 430	256 264	4.1 3.6	1580	8.1
30	1020	1.47	430	254	3.9	1620	8.1
APR.							
Q6	1020	1.46	430	262	3.8	1590	8.1
13	976	1.44	440	270	3.4	1560	8.0
20	963 1060	1.46	425	258	3.5	1570	8.1
27 MAY	1080	1.52	440	264	4.0	1660	8.1
94	959	1.39	405	248	3.7	1520	8.2
11	982	1.40	420	256	3.7	1550	8.2
18	1040	1.54	450	276	3.8	1660	8.1
25	1020	1.50	445	273	3.6	1620	8.1
JUNE	960	1 0/	405	246	0.7	1520	8.2
01 08	1060	1.36 1.55	445	246 268	3.7 4.0	1680	8.2
15	1050	1.54	445	266	3.9	1650	8.1
22	995	1.47	425	258	3.7	1570	8.1
29	1020	1.46	425	260	3.9	1580	8.2
JULY							
06	1000	1.44	425	261	3.8	1580	8.1
13	959	1.41	415	252	3.6	1520 1520	8.2 8.2
20 27	984 906	1.41	420 37 <b>5</b>	252 236	3.7 3.7	1430	8.0
AUG.	700	1.27	3/3	236	3.7	1430	•.0
03	973	1.44	415	256	3.7	1560	8.0
10	915	1.32	400	251	3.4	1450	8.1
17	982	1.44	410	244	3.8	1560	8.0
24	989	1.46	430	264	3.6	1560	8.0
31	994	1.46	430	262	3.7	1580	8.1
SEP. 08	1050	1.52	440	260	4.0	1670	8.1
14	1040	1.50	440	263	3.9	1630	8.2
21	1020	1.47	425	256	3.9	1590	8.2
28	1060	1.55	440	264	4.0	1660	8.1

#### 09430600 MOGOLLON CREEK NEAR CLIFF, N. MEX. (Hydrologic bench-mark station)

LOCATION (revised).--Lat 33°10'00", long 108°38'57", in SE¼ sec.13, T.13 S., R.18 W., Grant County, at gaging station 12 miles upstream from mouth and 14.2 miles north of Cliff.

DRAINAGE AREA. -- 69 sq mi.

PERIOD OF RECORD. --Chemical analyses: February 1967 to September 1970. Sediment records: October 1968 to September 1970 (partial records).

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOL VED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCD3) (MG/L)	CAR- BDNA TE (CO3) (MG/L)
DC T.								_		
29 NOV.	1100	3, 4	18	120	20	3 • 2	6.5	•9	59	0
22	1600	10	19	20	12	2.5	5.8	. 8	37	0
JAN.										
21	1630	6.4	16	0	11	2.2	5.6	• 4	38	0
FEB. 18	1700	4.1	16	20	12	2.1	5. 3	• 6	40	0
MAR.	1700	4.1	10	20	**		,,,	••	,,,	-
18,	1000	70	18	20	10	2.0	4. 6	.7	26	0
APR.									28	0
21 May	1645	21	17	0	9.5	1.7	4.4	•6	26	U
06	0715	24	16	10	8.5	1.4	4.4	. 4	26	0
JUNE	• • • • • • • • • • • • • • • • • • • •		_							
03	1045	2.4	18	0	11	2. 1	5, 5	• 7	42	0
AUG.				_						0
06	0415	7.7	24	0	18	4-1	7.6	1.6	63 52	Ö
06	1610	19	18	0	16	3.4	6.0	1.6	92	U
SEP. 09	1015	13	18	20	10	2. 0	4.9	• 7	36	0

	DIS- SOLVED SULFATE (SO4)	DIS- SOLVED CHLD- RIDE (CL)	DIS- SOLVED FLUO- RIDE (F)	DRGANIC NITRO- GEN (N)	TOTAL NITRO- GEN (N)	DIS- SOLVEO NITRITE (N)	DIS- SOLVED AMMONIA NITRO- GEN (N)	DIS- SDLVED NITRATE (N)	DIS_ SOLVED NITRATE (NO3)	TOTAL PHOS- PHORUS (P)
DATE	( MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	{MG/L}	(MG/L)
DC T.										
29	14	1.4	. 4					.00	-1	•03
NOV. 22	18	1.2	.5					•00	•0	.01
JAN.	10	1.0	• • •					•00	•0	•01
21	16	1.4	•5					.00	.1	
FE8.		_	_						_	
1B	14	•8	.5					.00	.0	•01
18	18	.6	. 4					.10	•3	•00
APR.	••	••	• •					•••	•••	•••
21	14	. 4	.4	•20	• 20	•00	•00	.00	-0	.01
MAY	• .		_							
JUNE	14	-1	•3					.00	• 2	.01
03	12	•2	.5					.00	.1	.00
AUG.								•••	••	
06	28	1.7	. 5					.00	•0	
06	22	1.6	•6					• 50	2.3	• 00
SEP. 09										••
U7000	13	•9	.5					.00	.0	• 02

# 09430600 MOGOLLON CREEK NEAR CLIFF, N. MEX. -- Continued

DATE	DI S- SDL VED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	DIS- SOL VED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AO- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.									
29 NDV.	40	90	94	49	0	•4	124		10.5
22	30	80	78	38	8	.4	110		6.5
JAN.					_				4.6
21 FEB.	40	83	72	38	7	•4	100		4.0
18	50	66	71	35	2	.4			6.0
MAR.		64	68	30	8	.4	88		5.0
18 APR,	110	09	•0	30	۰	• • •	<i>5</i> 0		,,,,
21	40	66	63	28	5	• 4	80		10.0
MAY 06	60	57	58	26	4	.4			8.4
JUNE	00	,,	,,,						
03	0	70	71	36	2	• 4		7.4	16.0
AUG.	50		117	62	10	.4			18.5
06 06	20	102	97	54	îĭ	.4	145	6.9	21.0
SEP.	20	102				•	•		
09	50	72	6B	34	4	.4		7.8	18.0

TOACC CLEMENT	AND RADIOCHEMICAL	ANALVEEC I	JATED VEAD	OCTORER	1040 TO	1 CEDTEMBED 10	70

DATE	TIME	DIS- SOLVED ALUM- INUM (AL) (UG/L)	OIS- SOLVED BARIUM (BA) (UG/L)	DIS- SOLVED BERYL- LIUM (BE) (UG/L)	DIS- SOLVEO BISMUTH (BI) (UG/L)		DIS- SOLVED CAD- MIUM (CD) (UG/L)	DIS- SOLVED CHRO- MIUM (CR) (UG/L)	DIS- SOLVED COBALT (CO) (UG/L)	COPPER (CU)	DIS- SOLVED GER- MANIUM (GE) (UG/L)
OCT. 29	0930	340	10	<1	<1		<18	<2	<2	1	<3
APR. 21	1645	27	3	<1	<1	3	<10	<2	<1	. 2	<1
AUG. 06	1610										
DATE	DIS SOLV LEA (PE	VED SOL AD LITH B) (L	VED MAI IUM GANI I) (MI	VED SOL N MOL ESE DE N) (M	YB- 50 NUM NI: 10) (1	IS- SOL LVED RUB CKEL DI NI) (R	11- SDI UM SII (8) (1	IS- SOL LVED STF LVER TI AG) (S	RON- SD IUM T SR) (	DIS IS- SOLV LVED TI- IN TANI SN) (TI G/L) (UG/	ED UM
OCT.											
29 APR.	•	<2	<1	6	<1	<2		<1	79	<2	15
21 AUG.	•	<5	<1	2	<1	<1	<1	<1	31	<1	1
06	•										
	DAT E	DIS- SOLVED VANA- DIUM (V)	01S- SOLVED Z INC (ZN) (UG/L)	DIS- SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS- PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS- SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	DIS- SOLVED GROSS BETA AS CS-137 (PC/L)	SUS- PENDEO GROSS BETA AS SR90 /Y90 (PC/L)	DIS- SCLVED RA-226 (RADON METHOD) (PG/L)	DIS- SOLVED NATURAL URANIUM (U)	
	CT.	100, 2.	(00,2,	10071	1007[7	(10/1)	(PC/L)	(PC/L)	(PC/L)	(UG/L)	
	29 PR.	<2.0	<110	<2.1	<.4	1.5	1.7	<.4	+C4	.05	
	21 UG.	<1.0	<65	1.4	<.4	1.5	1.9	<.4	.08	•C4	
	06			.6	200	3.5	4.4	81	.03	<.01	

## 09430600 MOGOLLON CREEK NEAR CLIFF, N. MEX.--Continued

## CHEMICAL ANALYSES, WATER YEAR 1969 TO SEPTEMBER 1970

FIELD AND BIOCHEMICAL DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)
0CT. 29 NOV.	1100	3.4		8.3	10.5		3
22	1600	10	110	7.8	6, 5		3
JAN- 21	1630	6.4	100	8.1	4.6		5
FEB. 18	1700	4.1	110	8.1	6.0		5
MAR. 18 APR.	1000	70		7.5	5.0	8.0	5
21 MAY	1645	21	88	8.1	10.0	12.5	8
06	0715	24	71	7.5	8.4	12.2	5
JUNE 03 AUG.	1 045	2.4	108		16.0	24.0	
06 SEP.	1610	19	140	7.9	21.0	22.5	150
09	1015	13	85		18.0	23.5	10
DATE	TUR- 810- 1TY (JTU)	DIS- SOLVED DXYGEN (MG/L)	CHEM- ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	BIO- CHEM- ICAL OXY GEN DE MAND (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	IMME- DIATE COLI- FORM (COL- PER 100 ML)	STREP- TÓCOCCI (COL- ONIES PER 100 ML)
ост.	411 (UTL)	SOLVED DXYGEN (MG/L)	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXY GEN DE MAND (MG/L)	CDLI- FGRM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML)	TÓCOCCI (CDL- ONIES PER 100 ML)
0CT. 29 NOV.	810- 1TY (JTU)	SOLVED DXYGEN (MG/L)	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHÉM- ICAL DXY GEN DE MAND (MG/L)	COLI- FGRM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML)	TÓCOCCI (CDL- ONIES PER 100 ML)
0CT. 29 NOV. 22 JAN.	810- 1TY (JTU)	SOLVED DXYGEN (MG/L) 9.2 9.9	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXY GEN DE MAND (MG/L)	CDLI- FGRM (COL. PER 100 ML) A <10	DIATE COLI- FORM (COL- PER 100 ML)	TÓCOCCI (COL- ONIES PER 100 ML) A <10
0CT. 29 NOV. 22	810- 1TY (JTU)	SOLVED DXYGEN (MG/L)	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHÉM- ICAL DXY GEN DE MAND (MG/L)	COLI- FGRM (COL. PER 100 ML)	DIATE COLI- FORM (COL. PER 100 ML)  12 12 A <100	TOCOCCI (COL- ONIES PER 100 ML) A <10 18 A <10
OCT. 29 NOV. 22 JAN. 21 FEB. 18	810- 1TY (JTU)	SOLVED DXYGEN (MG/L) 9.2 9.9	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL DXY GEN DE MAND (MG/L)	CDLI- FGRM (COL. PER 100 ML) A <10	DIATE COLI- FORM (COL- PER 100 ML)	TÓCOCCI (COL- ONIES PER 100 ML) A <10
OCT- 29 NOV- 22 JAN- 21 FEB- 18 MAR- 18	(JTU)	SOLVED DXYGEN (MG/L) 9.2 9.9 10.6	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L)	CHÉM- ICAL DXY GEN DE MAND (MG/L)	COLI- FORM (COL. PER 100 ML) A <10 5	DIATE COLI- FORM (COL. PER 100 ML)  12 12 A <100	TOCOCCI (COL- ONIES PER 100 ML) A <10 18 A <10
OCT. 29 NOV. 22 JAN. 21 FEB. 18	(JTU)	SOLVED DXYGEN (MG/L) 9.2 9.9 10.6	ICAL DXYGEN DEMAND (LOW LEVEL) (MG/L) 5 7	CHÉM- ICAL DXYGEN DE MAND (MG/L)	COLI- FORM (COL. PER 100 ML) A <10 5 A <10	DIATE COLI- FORM (COL- PER 100 ML) 12 12 A <100	TOCOCCI (CDL- ONIES PER 100 HL) A <10 18 A <10
OCT. 29 NOV. 22 JAN. 21 FEB. 18 MAR. 21 APR.	117 (JTU)	SOLVED DXYGEN (MG/L) 9.2 9.9 10.6 9.8 9.9	ICAL DXYGEN DEMAND (LOM LEVEL) (MG/L) 5 7	CHÉM- ICAL OXYGEN DE MAND (MG/L)	COL1- FORM (COL. PER 100 ML) A <10 5 A <10	DIATE COLI- FORM (COL. PER 100 ML) 12 12 A <100 17	TOCOCCI (CDL- ONIES PER 100 ML) A <10 18 A <10 2
OCT. 29 NOV. 22 JAN. 21 FEB. 18 APR. 21 JUNE 03	810- 1TY (JTU)	SOLVED DXYGEN (MG/L) 9.2 9.9 10.6 9.8 9.9	ICAL DXYGEN DEMAND (LOM LEVEL) (MG/L) 5 7 13 8 7	CHÉM- IC AL DXY GEN DE MAND (MG/L) -4 -4 -3 -4	COLI- FORM (COL. PER 100 ML) A <10 5 A <10  0	DIATE COLTECTORM (COL- PER 100 ML) 12 12 A <100 17 4 51	TÓCOCCI (CDL- ONIES PER 100 HL) A <10 18 A <10 2 15
OCT	810- 1TY (JTU)	SOLVED DXYGEN (MG/L) 9.2 9.9 10.6 9.8 9.9 8.4	ICAL DAYGEN DEMAND (LOM LEVEL) (MG/L) 5 7 13 8 7 6	CHEM- ICAL DXYGEN DE MAND (MG/L) -4 -4 -3 -4 -4 1.0	COLI- FORM (COL. PER 100 ML) A <10 5 A <10  0	DIATE COLITION (COL. FORM (COL. PER 100 ML)  12  12  A < 100  17  4  51 629	TOCOCCI (COL- ONIES PER 100 ML) A <10 18 A <10 2 15 19

A BACTERIOLOGICAL DATA FURNISHED BY THE NEW MEXICO ENVIRONMENTAL IMPROVEMENT AGENCY.

PESTICIDE ANALYSES, UNFILTERED SAMPLES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	ALDRIN (UG/L)	CHLDR- DANE (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI- ELDRIN (UG/L)	
OCT. 29	1100	3.4	.00		•oc	.co	.0.	.60	
AUG.	1612	19	.00	.0	•0C	.00	.00	.00	

DATE	ENDR IN	HEPTA- CHLDR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
0CT. 29 AUG.	•00	.00		.00	.00	.00	.00
ÿ6	•00	.00	.00	.00	.00	.00	.0

## 09430600 MOGOLLON CREEK NEAR CLIFF, A. MEX. -- Continued

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS AND PARTICLE-SIZE DISTRIBUTION, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 IMETHODS OF ANALYSIS: 8, BOTTOM WITHORAWAL TUBE; C, CHEMICALLY DISPRESE; N, IN NATIVE WATER; P, PIPET; S, SIFVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER;

			WATER			SUSPENDED					PART	ICLE :	SI ZE					ws Turon
			TEM-		CONCEN-	SEDIMENT	DEDCI		THEO	THAN	TUC 6	,,,		1 1 45	renci	INDIC	ATER	METHOD OF
			TURE	DISCHARGE			FEAG	LIMIT F	LHER	ITAN	1112 3	125 (	IK MI	LLINE	16431	INDIC	AIRU	ANALY-
	DATE	TIME	( C)	(CFS)		(TONS/DAY)	.002	.004	.008	.016	.031	.062	.125	.250	.500	1.90	2.00	515
DC T	29, 1969	0930	10-0	3.4	1	.01												
	22	1630	6.5	10	4	.11												
	21. 1970	1630	4.6	6.4	i	•02												
	18	1700	6.0	4.1	i	•01												
	18	1100	5.0	70	4	.76												
APR	21	1730	10.0	21	1	.06												
MAY	6	0645	8.4	25	5	. 34												
MAY	6	0645	8.4	25	5	.34												
JUN	3	1045	16.0	2.4	1	.01												
AUG	6	0350	18.5	7.7	1	-02												
AUG	6	0455		8.0	1	• 02												
AUG	6	0900	18.5	7.4	1	-02												
AUG	6	1430	22.5	7.4	1	•05												
AUG	6	1500	22.0	17	32	1.5												
AUG	6	1515	22.0	18	30	1.5												
AUG	6	1525	22.0	22	107	6.4												
AUG	6	1545	22.0	29	1080	85	64	76		88		190						PWC
AUG	6	1555	21.0	24	1240	80												
AUG	6	1610	21.0	19	943	49												
AUG	6	1630	21.0	17	1080	50												
AUG	6	1645	21.C	17	2300	106	54	73		97		100						PWC
AUG	6	1700	21.0	15	1780	72												
AUG	6	1730	21.0	14	1100	42												
AUG	6	1800	21.0	13	49 L	17												
AUG	5	1830	21.0	11	259	7.7												
AUG	6	1900	21.0	10	176	4.9												
AUG	6	2000	21.0	0.8	39	2.6												
AUG	7	0100	19.5	9. n	10	•24												
AUG	7	0745	17.5	8.0	3	-06												
SEP	9	1015	18.0	13	21	.74												

## 09431100 MANGAS CREEK BELOW MANGAS SPRINGS, N. MEX.

LOCATION.--Lat 32°50'57", long 108°31'13", in SETSWT sec.5, T.17 S., R.16 W., Grant County, 0.1 mile upstream from Blacksmith Canyon and 15 miles southeast of Gila.

DRAINAGE AREA. -- 177 sq mi.

PERIOD OF RECORD. -- Chemical analyses: April to September 1970.

CHEMICAL ANALYSES, APRIL TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- Clum (CA) (MG/L)	DIS- SCLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR+ BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
APR. 17	1100	1 5	23	62	13	26	228	0	46	9.0
MAY	1100			0.2						
19 JUNE	0845	1. 5	26	60	13	27	227	0	45	9.1
09	0810	1.3	31	68	13	27	254	0	45	9.8
JULY 13	1030	1.2	29	54	11	27	201	0	42	8.2
SEP. 11	14D0	1.D	30	59	12	29	228	0	43	8.8
DATE	DIS- SOL VED FLUO- RI DE (F) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	DIS_ SDL VED NITRATE (ND3) (MG/L)	DIS- SOLVEO SOLIOS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AO- SORP- TION RATIO	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH {UN1TS}	TEMPER- ATURE (DEG C)
APR. 17	•6	3. 8	17	310	206	19	.8	504	8.0	20.0
MAY	••	,,,		,,,						
19 JUNE	• 6	3.6	16	309	202	16	. 6	528	7. 7	19.0
09	•6	3.6	16	335	225	17	• B	536	8.0	17.0
JUL Y	.5	4,7	21	292	180	16	. 9	453	8.1	25.0
SEP. 11	. 5	3. 8	17	311	197	10	.9	483	8.2	30.0

## 09431500 GILA RIVER NEAR REDROCK, N. MEX.

LOCATION.--Lat 32°43'37" (revised), long 108°40'30", in W½ sec. 23, T.18 S., R.18 W., Grant County, at gaging station 0.2 mile downstream from Copper Canyon, 0.2 mile upstream from lower end of Box Canyon, 4.7 miles northeast of Redrock, and 14 miles downstream from Mangas Creek.

DRAINAGE AREA. -- 2,829 sq mi.

PERIOD OF RECORD. -- Chemical analyses: July 1967 to January 1970.

DA TE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVEO IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG+ NE- SIUM (MG) (MG/L)	DIS- SOLVEO SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
0CT. 02	1130	40	35		48	11		44		236	0	35
NOV.	1100	58	33		44	8.8		40		205	D	33
DEC.	1045	76	31		40	9.7		42		203	0	32
JAN .	1030	78	34		36	8 <sub>0</sub> 7		37		164	6	32
FEB. 17	0915	87	33		36	8.0		38		172	2	31
MAR. 03	1045	161	37		34	6.1		34		151	0	32
31	1100	129	35		32	6.3		32		141	3	31
20	1400	106	33	10	34	7.1	31		1.8	164	0	30
OB	100D	46	39		42	9.0		10		207	0	32
09 AUG.	1330	28	39	D	42	9. 7	40		3.0	215	0	35
13 SEP .	0950	68	39		41	8.4		39		197	0	32
18	0830	25	36		42	9,5		43		213	2	33
	DIS- SOLVED CHLO-	DIS- SOLVED FLUO-	DIS-	DIS_ SOLVED	DIS-	DIS- SOLVED SOLIDS		NON- CAR-	SODIUM AD-	SPECI- FIC		
DATÉ	RIDE (CL) (MG/L)	RIDE (F) (MG/L)	SOLVED NITRATÉ (N) (MG/L)	NI TRATE (NO3) (MG/L)	SOLVED BORON (8) (UG/L)	(SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	BONATE HARD- NESS (MG/L)	SORP- TIDN RATIO	COND- UCT ANCE (MI CRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
ост.	RIDE (CL) (MG/L)	RIDE (F) (MG/L)	NITRATÉ (N) (MG/L)	NITRATE (NO3) (MG/L)	BORON (8) (UG/L)	CONSTI- TUENTS) (MG/L)	NESS (CA,MG) (MG/L)	HARD- NESS (MG/L)	TIDN RATIO	UCT ANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
0CT. 02	RIDE (CL) (MG/L)	RIDE (F) (MG/L)	NITRATE (N) (MG/L)	NI TRATE (NO3) (MG/L)	BORON (8) (UG/L)	CONSTI- TUENTS) (MG/L)	NESS (CA,MG) (MG/L)	HARD- NESS (MG/L)	TIDN RATIO	UCT ANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
0CT. 02 NDV. 17	RIDE (CL) (MG/L) 18	RIDE (F) (MG/L) 2,2	NITRATÉ (N) (MG/L)	NI TRATE (NO3) (MG/L)	BORON (8) (UG/L)	CONSTITUENTS) (MG/L) 309 281	NESS (CA,MG) (MG/L) 165	HARD- NESS (MG/L)	T IDN RATI 0 1.5	UCTANCE (MICRO- MHOS) 472 431	(UNITS) 7.9 7.6	ATURE (DEG C) 17.0 13.0
0CT. 02 NDV. 17 0EC. 19 JAN.	RIDE (CL) (MG/L) 18 20 18	RIDE (F) (MG/L) 2,2 •6 2•2	NITRATE (N) (MG/L) .00 .00	NI TRATE (NO3) (MG/L) -0 -D	BORON (8) (UG/L)	CONSTI - TUENTS) (MG/L) 309 281 275	NESS (CA,MG) (MG/L) 165 146	HARD- NESS (MG/L) 0 0	1 IDN RATI 0 1.5 1.4	UCT ANCE (MICRO- MHOS) 472 431 414	(UNITS) 7.9 7.6 7.5	ATURE (DEG C) 17.0 13.0 8.0
0CT. 02 NDV. 17 0EC. 19 JAN. 14 FEB.	RIDE (CL) (MG/L) 18 20 18	RIDE (F) (MG/L) 2.2 .6 2.2 2.6	NITRATE (N) (MG/L)	NI TRATE (NO 3) (MG/L)  .0 .D .0	BORON (8) (UG/L)	CONSTI- TUENTS) (MG/L) 309 281 275 246	NESS (CA,MG) (MG/L) 165 146 140	HARD- NESS (MG/L) 0 0	1.5 1.4 1.5	UCTANCE (MICRO- MHOS) 472 431 414 397	7.9 7.6 7.5 8.6	17.0 13.0 8.0
OCT. 022 NDV. 17 OEC. 19 JAN. 14 FEB. 17 MAR.	RIDE (CL) (MG/L) 18 20 18 15	RIDE (F) (MG/L) 2,2 .6 2,2 2,6 2,6	NITRATE (N) (MG/L) .00 .00 .00 .00	NI TRATE (NO 3) (MG/L)  .0 .D .0 .0	BORON (8) (UG/L)	CONSTI- TUENTS) (MG/L) 309 281 275 246 251	NESS (CA,MG) (MG/L) 165 146 140 126	HARD- NESS (MG/L) 0 0 0	1.5 1.4 1.5 1.4	UCTANCE (MICRO- MHOS) 472 431 414 397 390	(UNITS) 7.9 7.6 7.5 8.6 8.3	ATURE (DEG C)  17.0  13.0  8.0  6.0
OCT.  02  NDV.  17  OEC.  19  JAN.  14  FEB.  17  MAR.  03  31	RIDE (CL) (MG/L) 18 20 18	RIDE (F) (MG/L) 2.2 .6 2.2 2.6	NITRATE (N) (MG/L)	NI TRATE (NO 3) (MG/L)  .0 .D .0	BORON (8) (UG/L)	CONSTI- TUENTS) (MG/L) 309 281 275 246	NESS (CA,MG) (MG/L) 165 146 140	HARD- NESS (MG/L) 0 0	1.5 1.4 1.5	UCTANCE (MICRO- MHOS) 472 431 414 397	7.9 7.6 7.5 8.6	17.0 13.0 8.0
OCT. O2 NDV. 17 OEC. 19 JAN. 14 FEB. 17 MAR. 03 31 APR. 20	RIDE (CL) (MG/L)  18 20 18 15 15	RIDE (F) (MG/L) 2.2 .6 2.2 2.6 2.6	NITRATE (N) (MG/L) .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	NI TRATE (NO3) (MG/L)  .0 .D .0 .0 .0	BORON (8) (UG/L)	CONSTI- TUENTS) (MG/L) 309 281 275 246 251	NESS (CA,MG) (MG/L)  165 146 140 126 123	HARD- NESS (MG/L) 0 0 0	1.5 1.4 1.5 1.4	UCTANCE (MICRO- MHOS) 472 431 414 397 390 353	(UNITS)  7.9  7.6  7.5  8.6  8.3  8.1	ATURE (DEG C)  17-0  13-0  8-0  6-0  10-0
OCT. 022 NDV. 17 0EC. 19 JAN. 14 FEB. 17 MAR. 03 31 APR. 20 JUNE 08	RIDE (CL) (MG/L)  18  20  18  15  15	RIDE (F) (MG/L) 2.2 .6 2.2 2.6 2.6 2.5 2.2	NITRATE (N) (MG/L)	NI TRATE (NO3) (MG/L)  .0  .D  .0  .0  .0  .0  .0  .0	BORON (8) (UG/L)	CONSTI- TUENTS) (MG/L) 309 281 275 246 251 234 222	NESS (CA,MG) (MG/L) 165 146 140 126 123 110	HARD- NESS (MG/L) 0 0 0 0	1.5 1.4 1.5 1.4 1.5 1.4	UCT ANCE (MICRO-MHOS)  472 431 414 397 390 353 331	(UNITS)  7.9  7.6  7.5  8.6  8.3  8.1  8.4	17.0 13.0 8.0 6.0 6.0
OCT. 02 02 NOV- 17 0EC- 19 14 FEB- 17 MAR. 03 31 APR. 20 JUNE 08 JULY 09	RIDE (CL) (MG/L)  18 20 18 15 15 11	RIDE (F) (MG/L) 2.2 .6 2.2 2.6 2.5 2.2	NITRATE (N) (MG/L) .00 .00 .00 .00 .00 .00 .00	NI TRATE (NO3) (MG/L)  .0  .0  .0  .0  .0  .0  .0  .0  .0  .	BORON (8) (UG/L)	CONSTI - TUENTS) (MG/L) 309 281 275 246 251 234 222	NESS (CA,MG) (MG/L)  165 146 140 126 123 110 106	HARD- NESS (MG/L)	1.5 1.4 1.5 1.4 1.5 1.4 1.5	UCTANCE (MICRO- MHOS) 472 431 414 397 390 353 331 357	(UNITS)  7.9  7.6  7.5  8.6  8.3  8.1  8.4	17.0 17.0 13.0 8.0 6.0 10.0 10.0
OCT	RIDE (CL) (MG/L)  18 20 18 15 15 11 11 11	RIDE (F) (MC/L) 2,2 .6 2,2 2,6 2,5 2,5 2,2	NITRATE (N) (MG/L)	NI TRATE (NO3) (MG/L) .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0	BDRON (8) (UG/L)	CONSTI- TUENTS) (MG/L) 309 281 275 246 251 234 222 232 280	NESS (CA,MG) (MG/L)  165 146 140 126 123 110 106 114	HARD- NESS (MG/L)  0  0  0  0  0  0  0  0  0	1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.4 1.3	UCTANCE (MICRO-MHOS)  472 431 414 397 390 353 331 357 428	(UNITS)  7.9  7.6  7.5  8.6  8.3  8.1  8.4  8.2	17.0 17.0 13.0 8.0 6.0 6.0 10.0 16.0
OCT. 02 NDV. 17 DEC. 19 JAN. 14 FEB. 17 MAR. APR. APR. JUNE 09 JULY 09 AUG.	RIDE (CL) (MG/L)  18  20  18  15  13  11  11  13	RIDE (F) (MG/L) 2,2 .6 2.2 2.6 2.5 2.2 2.4 2.5	NITRATE (N) (MG/L) .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	.0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .	BDRON (8) (UG/L)	CONSTITUENTS) (MG/L) 309 281 275 246 251 234 222 232 280 292	NESS (CA,MG) (MG/L)  165 146 140 126 123 110 106 114 142	HARD- NESS (MG/L) 0 0 0 0 0 0 0	1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.4 1.3	UCTANCE (MICRO-MHOS)  472  431  414  397  390  353  351  357  428  450	(UNITS)  7.9  7.6  7.5  8.6  8.3  8.1  8.4  8.2  8.2	17.0 13.0 8.0 6.0 10.0 10.0 16.0 18.0 28.0

#### 09433500 SUNSET CANAL ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX.

LOCATION.--Lat 32°41'42", long 109°02'48", in NW4SW4 sec. 31, T.18 S., R.21 W., Hidalgo County, north of U.S. Highway 70, 2.8 miles west of Virden.

PERIOD OF RECORD. -- Chemical analyses: August 1969 to September 1970.

RIMMARKS, -- Bacteriological analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency,

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TI ME	DIS- CHARGE (CFS)	DIS- SDLVED SILICA (SID2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SDLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SDLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BDNATE (HCD3) (MG/L)	CAR- BDNATE (CD3) (MG/L)	DI S- SOL VED SULFAT E ( SO4) (MG/L )	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
MAR,											
17 May	0900	•06	33	27	5.8	25	1.9	123	0	27	8.9
US JUNE	1040	8.0	32	48	9. 7	49	3.0	241	D	43	18
02	0930	• 05	44	60	17	151	3.3	528	0	107	40
DATE	DIS- SDLVED FLUG- RIDE (F) (MG/L)	DIS- SDLVED NITRATE (N) (MG/L)	DIS_ SOLVED NITRATE (ND3) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SDLIDS (SUM OF CONSTI- TUENTS)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SDRP- TION RATID	SPECI- FIC COND- UCTANCE (MICRO- MHDS)	PH (UNITS)	TEMPER- ATURE (DEG C)
DATE	( MO/L /	(HO)L)	(10/6/	(1107.67	(NO)LI	(1107.27	17107 27		1111037	10.11.01	
MAR. 17 MAY	1.8	•00	•0	184	190	89	0	1.2	284	7.9	10.0
US***	2.3	1.5	6.6	318	330	158	0	1.7	517	7.8	15.6
02	2.5	4. 7	21	714	706	214	0	4.5	1140	7.5	18.0

DATE	T IME	DIS- CHARGE (CFS)	SPECI- FIC CDND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	CDLDR (PLAT- INUM- COBALT UNITS)	TUR- 810- 1TY (JTU)	DIS- SOLVED DXYGEN (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	DIATE COLI- FORM (COL- PER 100 ML)	STREP- TOCOCCI (COL- DNIES PER 100 ML)
MAR.												
17 MAY	0900	• 06		9.4	10.0		7		9.0	20	<100	200
D5 JULY	1040	8.0	525	8.3	15.6	28.4	5	75	8.6	<10	180	90
06	1425	•05	1250		16.0	34. 5	3			E1500	5300	500

TMME-

E ESTIMATED.

## 09436500 NEW MODEL CANAL ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX.

LOCATION.--Lat 32°40'54", long 109°02'48", in NW\SW\frac{1}{4} sec.6, T.18 S., R.21 W., Hidalgo County, north of U.S. Highway 70 upstream from New Mexico-Arizona State line, 2.8 miles west of Virden.

PERIOD OF RECORD. -- Chemical analyses: July 1969 to September 1970. Sediment records: July 1970 (partial records).

REMARKS, -- Bacteriological analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency,

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

				,						
DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SIL ICA (SIO2) (MG/L)	DIS- SDLVED IRDN (FE) (UG/L)	DIS- SDLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SDLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCD3) (MG/L)	CAR- BONATE (CQ3) (MG/L)
0CT, 28	143D	7.9	35		45	9.2	41	2. 8	226	0
22	1030	7.0	35		42	8. 8	37	2.3	198	0
FEB. 18	1100	2. 2	32		42	7.7	37	2.4	190	4
MAR. 17	1330	15	32		27	5.7	24	1.9	126	0
APR. 21	1230	5.9	38	0	55	12	57	2.5	282	0
JUNE 02	1530	7.0	35		78	14	68	3.1	340	0
JULY										0
06	1700	5. 7	37		112	20	85	4.8	402	U
DATE	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRD- GEN (N) (MG/L)	DIS- SDLVED NITRITE (N) (MG/L)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	TDTAL PHDS- PHORUS (P) (MG/L)
OC T.										
28	34	15	2, 5					•00	.0	
22	34	13	2.3					•10	.4	
FEB. 18	32	15	2.5					•10	-4	
MAR. 17	29	8.8	1.7					•20	.9	
APR. 21	49	18	2. 1	•11	. 65	.180	.00	•40	1.8	.03
JUNE 02	66	26	2.2					1.2	5.3	
JULY	122	43	2.0					3,4	15	
0.5666	***							2.4	• -	
DA	DIS SOLV BORG (E	PED (RES	VED SOLVED SOLVE	DS DF HARD 1- NESS S) (CA,M	HAR G) NES	R- A ATE SORI D- TII S RAT	D- FI P- CON ON UCTA	C D- NCE P RO-	H TEMP ATU	RÉ
OC T										
28 NOV	•••	1	300 2	97 1	49	0	1.5		1	6.0
	•••	2	270 2	72 1	39	0	1.4			5.5
	•••	8	264 2	68 1	32	0	1.4			8.0
17	•••	1	184 1	.93	90	0 :	1.1		1	4.5
APK.	•									

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENT, WATER YEAR OCTOBER 1969 TD SEPTEMBER 1970

180

255

348

18

2.0

0 1.8

0 1.9

--

7.7 22.0

--

18.5

16.5

376

464

638

363

445

610

17... APR. 21... JUNE

02... JULY

06...

130

DATE	TIME	WATER TEM- PERA- TURE ( C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT OISCHARGE (TONS/DAY)
JUL~ 1970	1715	16.5	5.8	37	.58

09436500 NEW MODEL CANAL ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX.--Continued

CHEMICAL ANALYSES, WATER YEAR 1969 TO SEPTEMBER 1970

FIELD AND BIOCHEMICAL DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)
OCT . 28	1430	7.9	465	8.3	16.0	-	
NOV. 22	1030	7.0	450	8.1	5.5		
FEB. 18 MAR.	1100	2.2	450	8.1	8. 0		2
17 APR.	1330	15	300	8.0	14.5	18.0	5
21 JUNE	1230	5.9	600	8.1	18.5	24.7	3
02 JULY	1530	7.0	740		22.0	31.0	2
06	1700	5.7	980	7. 3	16.5	33.0	4
	TUR~ 81D- 1TY	DIS- SOLVED OXYGEN	CHEM- ICAL DXYGEN DEMAND (LOW LEVEL)	BIO- CHEM- ICAL OXYGEN DEMAND	FECAL COLI- FORM {COL. PER	IMME- DIATE COLI- FORM (COL- PER	STREP- TOCOCCI (COL- ONIES PER
DATE	(ÚTÚ)	(MG/L)	(MG/L)	(MG/L)	100 ML)	100 ML)	100 ML)
0CT. 29 NOV.		9.1			<10	15	1
22 FEB.		11.4		-	30	600	<10
18 Mar.		10.0				22	
17 APR.		7.9			<10	<100	30
21 JUNE	24	11.8			10	<100	90
JULY	1	10.0			<10	200	30
06	0	5, 5	5	1.0	<10	<100	<10

PESTICIDE ANALYSIS OF UNFILTERED SAMPLE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DA TE	TIME	ALDR IN	CHLOR- DANE (UG/L)	000 (UG/L)	DDE (UG/L)	00T (UG/L)	DI- ELDRIN (UG/L)
JULY 06	1700	.00	• 0	•00	.00	• 00	•00
	ENDR IN	HEPTA- CHLOR	HEPTA- CHLOR EPOXIDE	LI NOANE	2,4-0	2,4,5-T	SILVEX
DATE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
06 JULY	.00	• 00	.00	•00	•00	.00	•00

BIOCHEMICAL AND SPECTROGRAPHIC ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY)

DATE	TIME	DIS- SOLVED NITRATE (N) (MG/L)	DIS. ORTHO + HYDRO. PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ARSENIC (AS) (UG/1)	DIS- SOLVED COPPER (CU) (UG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED MAN- GANESE (MN) (UG/L)	DIS- SOLVEO VANA- DIUM (V) (UG/L)	DIS- SOLVED ZINC (ZN) (UG/L)
APR. 21 JUNE	1235	.35	.100						
02	1535	1.8	.060	<10	5	<50	10	<1000	10

## 09438000 GILA RIVER ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX.

LOCATION.--Lat 32°41'12", long 109°02'50", in SEANWANEA sec.6, T.19 S., R.21 W., Hidalgo County, at state line 2.8 miles west of Virden, N. Mex., and 3.5 miles southeast of Duncan, Ariz.

DRAINAGE AREA. -- 3,349 sq mi.

PERIOD OF RECORD. --Chemical analyses: October 1967 to February 1969, July 1969 to September 1970. Sediment records: January to September 1970 (partial records).

REMARKS. --Bacteriological analyses from samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

	CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970										
OATE	TI ME	DIS- CHARGE (CFS)	DIS- SOL VED SIL ICA	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SDLVED SODIUM (NA) (MG/L)	DIS- SOLVED PD- TAS- SIUM (K) (MG/L)	81CAR- BDNATE (HCO3) (MG/L)	CAR- BDNATE (CD3) (MG/L)	
OCT. 28	1130	6 <b>6</b>	36		49	10	43	3.1	247	0	
NOV, 22	1000	39	35		46	9. 2	41	2.5	217	D	
JAN. 21	0800	67	32		42	8.2	40	1.6	212	0	
FEB. 18	1200		32		44	B•3	42	2.2	208	4	
MAR. 17	1100		32		29	6.3	27	1.9	138	0	
APR. 21	0930	68	34	D	4D	8. 7	38	2.2	201	0	
MA Y 05	1210		31		44	9.2	42	2.0	226	0	
JUNE 02	1010		34		56	11	56	3.2	282	0	
JULY	1520		-		72	15	86	6.1	298	0	
00	1520	• >0	15		12	17	30	•••	2,0	_	
DATE	DIS- SOLVE SULFAT (SO4) (MG/L	D CHLO- E RIDE (CL)	FLUO- RIDE (F)	DRGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	DIS- SOLVED NITRITE (N) (MG/L)	DIS- SOLVED AMMDNIA NITRO- GEN (N) (MG/L)	DIS- SOLVED NITRATE (N) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	TOTAL PHOS - PHORUS (P) (MG/L)	
OCT. 28	37	18	2.4					.10	.4		
NDV. 22	36	14	2. 3					•20	•9		
JAN. 21	34	15	2.3					•20	• 9		
FEB.	34	16	2.4					.00	.0		
MAR. 17	29	9.0						. 20	. 9		
APR.	33	13	2, 1	•12	• 12	• 00	•D0	• 00	•0	• 05	
MA Y 05	37	15	2.2					.10	.4		
JUNE	46	19	2.4					•30	1.3		
JUL Y								1.1	4.9		
D6	118	DIS- SOL VED BORON	SOLVED SO SOLIDS SO (RESI- (SO DUE AT COM	DIS- DLVED DLIDS JM OF HA	IRD- 81	NON- SC CAR- DNATE SC ARD- T	DIUM SI AD- F IRP- CO ION UCT	PECI- FIC DND- FANCE	PH TEM	PER- URE	

DATE	DI S- SOL VED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOL VED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BDNATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATID	SPECI- FIC COND- UCTANCE (MICRD- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	
OCT.										
28		319	320	164	0	1.5			16.0	
22 Jan.		290	294	151	0	1.4		8.1	5.5	
21 FEB.		277	280	142	0	1.5	442		5.0	
18 MAR.		282	287	143	0	1.5	445		12.0	
17 APR.		197	205	98	0	1.2			13.0	
21 May	90	266	271	130	0	1.4		8.2	12.5	
D5		286	294	149	0	1.5			21.1	
02 JULY		359	368	176	0	1.8		8.1	18.5	
06		496	506	240	0	2.4			29.0	

09438000 GILA RIVER ABOVE NEW MEXICO-ARIZONA STATE LINE, N. MEX. -- Continued

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#### CHEMICAL ANALYSES, WATER YEAR 1969 TO SEPTEMBER 1970

FIELD AND BIOCHEMICAL DETERMINATIONS

DATE	TIME	DIS- CHARGE (CFS)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)
00T. 28	1130	66	500	8. 5	16.0		
NOV.							
22 JAN.	1000	39	47C	8.1	5.5		
21 FEB.	0800	67		8.4	5.0		5
18 MAR.	1200	31		8.1	12.0		5
17 APR.	1100	164	320	7.9	13.0	17.5	5
21 MAY	0930	68	419		12.5	20.0	3
05 JUNE	1210	58	465	8.6	21.1	31.4	5
02 JUL Y	1010	6.5	560		18.5	26.0	3
06	1520	•50	820	8, 4	29.0	34.5	10
DATE	TUR- 8[D- ITY (JTU)	DI S- SOLVED OXYGEN (MG/L)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	FECAL COLI- FORM (COL. PER 100 ML)	IMME- OI ATE COL I- FORM (COL- PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
OCT.	(110) (11)	SOLVED OXYGEN (MG/L)	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL OXYGEN DEMAND	COL I- FORM (COL. PER 100 ML)	OIATE COLI- FORM (COL- PER 100 ML)	TOCOCCI (COL- ONIES PER 100 ML)
DET. 28 NOV.	BID- ITY	SOLVED OXYGEN (MG/L)	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL OXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	OIATE COLI- FORM (COL- PER 100 ML)	TOCOCCI (COL- ONIES PER 100 ML)
0CT. 28	(110) (11)	SOLVED OXYGEN (MG/L)	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL OXYGEN DEMAND	COL I- FORM (COL. PER 100 ML)	OIATE COLI- FORM (COL- PER 100 ML)	TOCOCCI (COL- ONIES PER 100 ML)
0CT. 28 NOV. 22	(110) (11)	SOLVED OXYGEN (MG/L)	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL OXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	OIATE COLI- FORM (COL- PER 100 ML)	TOCOCCI (COL- ONIES PER 100 ML)
OCT. 28 NOV. 22 JAN. 21 FEB. 18	81D- 1TY (JTU)	SOLVED OXYGEN (MG/L) 8.B	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL OXYGEN DEMAND (MG/L)	COLI- FORM (COL. PER 100 ML)	OIATE COLI- FORM (COL- PER 100 ML) 21	TOCOCCI (COL- ONIES PER 100 ML)
OCT. 28 NOV. 22 JAN. 21 FEB. 18 MAR. 17	81D- 1TY (JTU)	SOLVED OXYGEN (MG/L) 8.8 11.2	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL OXYGEN DEMAND (MG/L)	COL I- FORM (COL. PER 100 ML) 1 380 228D	OIATE COLI- FORM (COL- PER 100 ML) 21	TOCOCCI (COL- ONIES PER 100 ML) <10 <10
OCT. 28 NOV. 22 JAN. 21 FEB. 18 MAR.	-die	8.B 11.2 11.1	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL IC AL	COL I- FORM (COL. PER 100 ML) 1 380 228D	OIATE COLI- FORM (COL- PER 100 ML)	TOCOCCI (COL- ONIES PER 100 ML) <10 <10
OCT. 28 NOV. 22 JAN. 21 FEB. 18 MAR. 17 APR. 21 MAY. 05	-018 (UTL)	SOLVED OXYGEN (MG/L) 8.8 11.2 11.1 10.0 8.0	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- IC AL OXYGEN DEMAND (MG/L)	COL I- FORM (COL. PER 100 ML) 1 380 228D	OIATE COLI- FORM (COL- PER 100 ML)  21 600 <100	TOCOCCI (COL- ONIES PER 100 ML) <10 <10  120
OCT. 28 NOV. 22 JAN. 21 FEB. 18 MAR. 17 APR. 21 MAY	810- 1TY (JTU)	SOLVED OXYGEN (MG/L) 8.B 11.2 11.1 10.0 8.0	ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	CHEM- ICAL OXYGEN DEMAND (MG/L)8	COL I- FORM (COL. PER 100 ML) 1 380 228D  10 <10	01 ATE COLI- FORM (COL- PER 100 ML)  21 600 <100 <100	TOCOCCI (COL- ONIES PER 100 ML) <10 <10 <10  120 <10

PESTICIDE ANALYSES, UNFILTERED SAMPLES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DA TE	TIME	ALDRIN (UG/L)	CHLOR- DANE (UG/L)	DDO (UG/L)	DDE (UG/L)	DDT (UG/L)	DI- ELDRIN (UG/L)
JULY 06	1520	•00	•0	•00	•01	.01	•00
	ENDRIN	HEPTA- CHLOR	HEPTA- CHLOR EPOXIDE	LINDANE	2,4-D	2,4,5-T	SILVEX
DATE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L )	(UG/L)	(UG/L)
06	.00	.00	.00	•00	.25	.00	.00

BIOCHEMICAL AND SPECTROGRAPH ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY)

DATE	TIME	DIS- SCLVED NITRATE (N) (MG/L) (00618)	OIS. ORTHO + HYDRO. PHOS- PHORUS (P) (MG/L) (OC677)	DIS- , SOL VED ARSENIC (AS) (UG/L) (01000)	DIS- SOLVED CAD- MIUM (CD) (UG/L) (01025)	DIS- SOLVED COPPER (CU) (UG/L) (0104D)	DIS- SOLVED IRDN (FE) (UG/L) (01046)	DIS- SDLVED LEAD (PB) (UG/L) (01049)	DIS- SOLVED MAN- GANESE (MN) (UG/L) (01056)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L) (01085)	DIS- SOLVED ZINC (ZN) (UG/L) (O1090)
DCT. 28	1135			<100	<4	<10	<10	<40	<20	40		20
JAN. 21 APR.	0805	<.02	.420	<100	<3	<10	<30	<40	<20	<20		<10
21 JUNE	0935	.03	.080	<100	<3	<10	<30	<40	<20	<20		<10
02	1015	.31	.160	<10		<5	<1		10		<1000	5

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	WATER TEM- PERA- TURE ( C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT OISCHARGE (TONS/DAY)
JAN 21, 1970	C800	5.0	67	177	32
JUL 6	1600	29.0	.50	74	

#### 09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, N. MEX.

LOCATION (revised).--Lat 33°14'48", long 108°52'47", in NEINWI sec. 23, T.12 S., R.20 W., Catron County, at gaging station 0.2 mile upstream from hot springs, 5 miles south of Glenwood, 6 miles downstream from Whitewater Creek, and at mile 64.6.

DRAINAGE AREA, -- 1,653 sq mi.

PERIOD OF RECORD. -- Chemical analyses: April 1963 to September 1970, Sediment records: April 1963 to July 1967, July 1970 to September 1970 (partial records).

REMARKS. --Bacteriological and macroinvertebrate analyses of samples collected by the U.S. Geological Survey are analyzed by the New Mexico Environmental Improvement Agency.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DIS-DIS- SOLVED DIS- DIS-SOLVED SOLVED

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOL VED SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	SOLVED CAL- CIUM (CA) (MG/L)	MAG- NE- S IUM (MG) (MG/L)	DIS- SOL VED SOD IUM (NA) (MG/L)	SOLVED SODIUM PLUS PDTAS- SIUM (MG/L)	50LVED PO- TAS- SIUM (K) (MG/L)	BICAR- BDNATE (HCO3) (MG/L)
OC T.										
26 31	1715 0930	4 <b>8</b> 32	39 37		39 38	9.7 10	56	16	3.9	175 188
NDV.	0930	32	31		36	10		10		
22 DEC.	1355	39	37		38	9• 8	30		2 •6	188
10 JAN.	1315	34	35		36	9.5		23		198
21 FEB.	1400	29	34		36	8.8	21		1.7	167
18 MAR.	1500	11	33		35	9.0	20		2.1	135
17	1730	45	38		37	9• 2	41		3.2	162
22 MA Y	1000	26	34	0	32	8. 4	28		2.5	162
05	1520	26	34		32	7.8	41		2 • 4	139
D2 JULY	1900	21	37		32	7.2	40		3.0	144
07 AUG.	1045	14	25		41	9.7	39		3.2	183
07 SEP.	1320	24	36	0	36	9• G	33		3.3	192
08	1745	19	37	0	29	7.7	30		2.6	130
	CAR- BONATE (CO3)	DIS- SOLVEO SULFATE (\$04)	OIS- SOLVED CHLO- RIDE (CL)	DIS- SOLVED FLUO- RIDE (F)	ORGANIC NITRO- GEN (N)	TOTAL NITRO- GEN (N)	DIS- SDLVED NITRITE (N)	DIS- SOLVED AMMONIA NITRD- GEN (N)	DIS- SOLVED NITRATE (N)	DIS_ SOLVED NITRATE (ND3)
DATE	BONATE	SOL VEO SUL FATE	SOLVED CHLO- RIDE	SOLVED FLUO- RIDE	NITRO- GEN	NITRO- GEN	SDL VED NITRITE	SOLVED AMMONIA NITRD- GEN	S OLVED NITRATE	SOLVED NITRATE
ост.	BONATE (CO3) (MG/L)	SOL VEO SULFATE (\$04) (MG/L)	SOLVED CHLO- RIDE (CL) (MG/L)	SOLVED FLUO- RIDE (F) (MG/L)	NITRO- GEN (N)	NITRO- GEN (N) (MG/L)	SDLVED NITRITE (N)	SOLVED AMMONIA NITRD- GEN (N) (MG/L)	SOLVED NITRATE (N) (MG/L)	SOLVED NITRATE (ND3) (MG/L)
OCT. 28	BONATE (CO3)	SOL VEO SUL FATE (\$04)	SOLVED CHLO- RIDE (CL)	SOLVED FLUO- RIDE (F)	NITRO- GEN (N)	NITRO- GEN (N)	SDLVED NITRITE (N)	SOLVED AMMONIA NITRD- GEN (N)	SOLVED NITRATE (N)	SOLVED NITRATE (ND3)
0CT. 28 31 NOV. 22	BONATE (CO3) (MG/L)	SOLVEO SULFATE (\$04) (MG/L)	SOLVED CHLO- RIDE (CL) (MG/L)	SOLVED FLUO- RIDE (F) (MG/L)	NITRO- GEN (N) (MG/L)	NITRO- GEN (N) (MG/L)	SDLVED NITRITE (N) (MG/L)	SOLVED AMMONIA NITRD- GEN (N) (MG/L)	SOLVED NITRATE (N) (MG/L)	SOLVĒD NITRATE (ND3) (MG/L)
0CT- 28 31 NOV- 22 DEC- 10	BONATE (CO3) (MG/L)	SOL VEO SUL FATE (\$04) (MG/L)	SOLVED CHLO- RIDE (CL) (MG/L)	SOLVED FLUO- RIDE (F) (MG/L)	NITRO- GEN (N) (MG/L)	NITRO- GEN (N) (MG/L)	SDLVED NITRITE (N) (MG/L)	SOLVED AMMONIA NITRD- GEN (N) (MG/L)	SOLVED NITRATE (N) (MG/L)	SOLVED NITRATE (ND3) (MG/L)
OCT. 28 31 NOV. 22 DEC. 10 JAN. 21	BONATE (CO3) (MG/L) 12 12	SOL VEO SULFATE (\$04) (MG/L) 15 10	SOLVED CHLO- RIDE (CL) (MG/L)	SOLVED FLUO- RIDE (F) (MG/L)	NITRO- GEN (N) (MG/L)	NITRO- GEN (N) (MG/L)	SDLVED NITRITE (N) (MG/L)	SOLVED AMMONIA NITRD- GEN (N) (MG/L)	SOLVED NITRATE (N) (MG/L) -1D -20	SOLVED NITRATE (ND3) (MG/L)
OCT. 28 31 NOV. 22 DEC. 10 JAN. 21 FEB.	BDNATE (CO3) (MG/L) 12 12 4	SOL VEO SULFATE (SO4) (MG/L) 15 10 12	SOL VED CHLO- RIDE (CL) (MG/L) 67 4.6 20	SOLVED FLUO- RIDE (F) (MG/L)	NITRO- GEN (N) (MG/L)	NITRO- GEN (N) (MG/L)	SDLVED NITRITE (N) (MG/L)	SOLVED AMMONIA NITRD- GEN (N) (MG/L)	SOLVED NITRATE (N) (MG/L) -10 -20 -20	SOLVED NITRATE (ND3) (MG/L)
OCT. 28 31 NDV. 22 DEC. 10 JAN. FEB. 18 MAR.	BONATE (CO3) (MG/L) 12 12 4 0	SOL VEO SULFATE (504) (MG/L) 15 10 12 10	SOL VED CHLO- RIDE (CL) (MG/L) 67 4.6 20 4.3 5.4	SOLVED FLUO- RIDE (F) (MG/L)	NITRO- GEN (N) (MG/L)	NITRO- GEN (N) (MG/L)	SDLVED NITRITE (N) (MG/L)	SOLVED AMMONIA NITRO- GEN (N) (MG/L)	S OLV ED NITRATE (N) (MG/L) -10 -20 -20 -20 -10	SOLVED NITRATE (ND3) (MG/L)
OCT. 28 31 NDV. 22 DEC. 10 JAN. 21 FEB. HAR. 17 APR. 22	BONATE (CO3) (MG/L)  12 12 12 4 0 15	SOL VEO SULFATE (504) (MG/L) 15 10 12 10 10	SOL VED CHLO- RIDE (CL) (MG/L) 67 4.6 20 4.3 5.4	SOLVED FLUO- RIDE (F) (MG/L)	NITRO- GEN (N) (MG/L)	NITRO- GEN (N) (MG/L)	SDLVED NITRITE (N) (MG/L)	SOLVED AMMONIA NITRO- GEN (N) (MG/L)	SOLVED NITRATE (N) (MG/L) -10 -20 -20 -20 -10	SOLVED NITRATE (ND3) (MG/L) .4 .9 .9
OCT. 28 31 NDV. 22 DEC. 10 5EB. 19 FEB. 17 APR. 22 HAY. 05	BONATE (CO3) (MG/L)  12 12 12 4 0 15 14	SOL VEO SULFATE (504) (MG/L) 15 10 12 10 10 10	SOL VED CHLO- RIDE (CL) (MG/L) 67 4.6 20 4.3 5.4 6.0	SOLVED FLUD- RIDE (F) (MG/L) *6 .4 .5 .4	NITRO- GEN (N) (MG/L)	NITRO- GEN (N) (MG/L)	SOLVED NITRITE (N) (MG/L)	SOLVED AMMONIA NITRO- GEN (N) (MG/L)	SOLVED NITRATE (N) (MG/L) -10 -20 -20 -20 -10 -00	SOLVED NITRATE (ND3) (MG/L) -4 -9 -9 -9 -4 -D
OCT. 28 28 NDV. 22 10 10 21 FEB. 13 MAR. 17 APR. 22 HAY 05 JUNE 02	BONATE (CO3) (MG/L)  12 12 4 0 15 14	SOL VEO SULFATE (\$04) (MG/L) 15 10 12 10 10 10 14	SOL VED CHLD- RIDE (CL) (MG/L) 67 4.6 20 4.3 5.4 6.0 0	SOLVED FLUD- FLUD- RIDE (F) (MG/L) .6 .4 .5 .4 .4	NITRO- GEN (N) (MG/L)	NITRO- GEN (N) (MG/L1)      	SDLVED NITRITE (N) (MG/L)	SOLVED AMMONIA NITRD- GEN (N) (MG/L)	SOLVED NITRATE (N) (MG/L) -10 -20 -20 -20 -10 -00 -10	SOLVED NITRATE (ND3) (MG/L) -4 -9 -9 -9 -4 -D
OCT. 28 31 NDV. 22 DEC. 10 JAN. 21 FEB. 18 MAR. 17 APR. 22 MAY. US JUNE 02 JULY 07	BONATE (CO3) (MG/L) 12 12 12 4 0 0 15 14 10 0 8	SOLVEO SULFATE (504) 15 10 12 10 10 10 10 14 13	SOL VED CHLO-RIDE (CL) (MG/L) 67 4.6 20 4.3 5.4 6. 9 40 23 47	SOLVED FLUD- FLUD- RIDE (F) (MG/L) .6 .4 .4 .4 .4 .6	NITRO- GEN (N) (MG/L)	NITRO- GEN (N) (MG/L)	SDLVED NITRITE (N) (MG/L)	SOLVED AMMONIA NITRD- GEN (N) (MG/L)	SOLVED NITRATE (N) (MG/L)	SOLVED NITRATE (ND3) (MG/L) -4 -9 -9 -9 -4 -D -4 -4
OCT. 28 31 NDV. 22 DEC. 10 JAN. 21 FEB. 13+ MAR. 17+ APR. 22 MAY OS JUNE O2 JULY	BONATE (CO3) (MG/L) 12 12 12 4 0 15 14 10 0 8 3 3	SOLVEO SULFATE (\$04) (MG/L) 15 10 10 10 10 14 13 14	SOL VED CHLO-RIDE (CL) (MG/L) 67 4.6 20 4.3 5.4 6.0 9 40 23 47 45	SOLVED FLUD- FLUD- (F) (MG/L) .6 .4 .5 .4 .4 .6 .5	NITRO- GEN (N) (MG/L)	NITRO- GEN (N) (MG/L)	SOLVED NITRITE (N) (MG/L) (MG/L) (	SOLVED AMMONIA NITRO- GEN (N) (MG/L)	SOLVED NITRATE (N) (MG/L)	SOLVED NITRATE (ND3) (MG/L) .4 .9 .9 .9 .4 .D .4

### 09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, N. MEX.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

OAT E	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED BORDN (B) (UG/L)	DIS- SOL VED SOL IDS (RESI- DUF AT 18D C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD→ NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.										
28			331	329	136	0	2.1	546		22.0
31				221	138	0	• 6	344	8.7	10.0
NOV.						_				
22 DEC.			240	247	133	0	1.1	380		11.0
10				216	130	0	. 9	331	8.2	15.0
JAN.					•	•	• •		0.2	
21,			201	215	131	0	.8	322		14.5
FEB.			• • • •		100	_				
18 MAR.			188	196	100	0	•9	279		18.0
17			256	273	125	0	1.6	480		18.0
APR,						•				
22	.030	70	219	223	112	0	1.2	366	8.1	14.5
MAY						_				
UNE			250	256	111	0	1.7			23.1
02			250	253	109	D	1.7		8.3	26.5
JULY					•••	-			0.3	
07			265	266	132	0	1.5	431		22.5
AUG.										
07 SEP.			251	255	131	0	1.3			27,0
08			230	221	107	0	1.3			28.5

### FIELD DETERMINATIONS

TIME	DIS- CHARGE (CFS)	FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMPER- ATURE (DEG C)	COLOR (PLAT - INUM- COBALT UNITS)
1715	48		8.4	22.0		
1255	20		0.5	11.0		
1333	39		0.0	11.0		
1400	29		9. 1	14.5		0
			_			_
1500	11		8.7	18.0		5
	4.6			10.0	16.0	.7
1730	49		0.0	10.00	10.0	•
1000	26			14.5	13.0	5
1520	26	410	7. 0	23.1	28.4	3
				24.5	20.0	4
1900	41	415		20.5	29.0	•
1045	14		8.6	22.5	31.5	3
1045			• • •			
1320	24	400	8.1	27.0	32.0	6
						5
1745	19	350	8.7	28. D	29.0	,
	1715 1355 1400 1500 1730 1000 1520 1900	TIME CHARGE (CFS)  1715	TIME CHARGE (CFS) FIC CUCTANCE (CFS) CHARGE (ICFS) CHARGE	TIME CHARGE CHAR	TIME CHARGE (MICRO- CICFS) MHOS1 (UNITS) TEMPERATURE (UNITS) (DEG C)  1715 48 8.4 22.0  1355 39 8.5 11.0  1400 29 9.1 14.5  1500 11 8.7 18.0  1730 45 8.6 18.0  1000 26 14.5  1520 26 410 7.0 23.1  1900 21 415 26.5  1045 14 8.6 22.5  1320 24 400 8.1 27.0	TIME CHARGE (MICRO- (CFS) MHOS) (UNITS) (DEG C)  1715 48 8.4 22.0 1355 39 8.5 11.0 1400 29 9.1 14.5 1500 11 8.7 18.0 1730 45 8.6 18.0 16.0 1000 26 14.5 13.0 1520 26 410 7.0 23.1 28.4 1900 21 415 26.5 29.0 1045 14 8.6 22.5 31.5 1320 24 400 8.1 27.0 32.0

#### 09444000 SAN FRANCISCO RIVER NEAR GLENWOOD, N. MEX .-- Continued

#### CHEMICAL ANALYSES, WATER YEAR 1969 TO SEPTEMBER 1970

FIELD AND BIOCHEMICAL DETERMINATIONS

DAT E	TUR- BID- ITY (JTU)	DIS- SOLVEO OXYGEN (MG/L)	CHEM- ICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIO- CHEM- ICAL DXYGEN DEMAND (MG/L)	FECAL COLI- FORM (COL- PER 100 ML)	IMME- DIATE COLI- FORM (COL- PER 100 ML)	STREP- TOCOCCI (COL- ONIES PER 100 ML)
DCT.							
28		7.0	8	.8	1	6	2
NOV. 22		8.8	9	1.2	<10	<100	<10
JAN.		•••	,		120	1200	
21		9 <b>.</b> B	8	•7	<10	<100	<10
FEB. 18		9.0	9	.9		6	
MAR.		7.0	7	• 7		•	
17		7.2	15	1.0	40	<100	20
APR.	_						
22 May	5	9.0	12	1.4	<10	<1 00	60
05	6	7. 9	14	1.6	30	<100	10
JUNE							
02	4	5.6	12	•9	<10	300	330
JULY 07	4	7.9	7	.9	20	<100	50
AUG.	•	7.07	,	• •	20	(100	,,
07	200	6.3	6	1.8	450	4900	1200
SEP.							
08	6	6. 4	14	1.0	<10	<100	<100

MACROINVERTEBRATE ANALYSIS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

SEPT B, 1970 - COLLECTED BY SURBER SAMPLER (3 SQ FT)

ORGANISM AND CLASSIFICATION	NUMBER
EPHEMEROPTERA	
AMELETUS SP.	8
HEPTAGENA SP.	1
THRAULODES SP.	24
UNIDENTIFIED BAETIDAE	9
TRICORYTHODES	1
TRICHOPTERA	
MACRONEUM SP.	7
COLEOPTERA	
GYRINIDAE (DINEURUS SP.)	4
TOTAL NUMBER OF ORGANISMS	50

COMMON NAME FOR PRECEDING ORDERS: EPHEMEROPTERA - MAYFLIES TRICHOPTERA - CADDIS FLIES COLEOPTERA - BEETLES

SPECTROGRAPHIC ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (FURNISHED BY ENVIRONMENTAL PROTECTION AGENCY)

			015-				-210		DIS-	
		DIS-	SOL VED	OIS-	DIS-	-2 J O	SOLVED	015-	SOLVED	DIS-
		SOLVED	CAD-	SOLVED	SOLVED	SOLVED	MAN-	SOLVED	VANA-	SOLVED
	TIME	ARSENIC (AS)	MIUM (CD)	COPPER (CU)	IRON	LEAD	GANESE	NICKEL	DIUM	ZINC
DATE	INDE	(UG/L)	(UG/L)		(FE)	(PB)	(MN)	(NI)	(4)	(ZN)
DATE		(067L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
OCT.										
28	1720	<100	<4	<10	<10	<40	<20	30		10
JAN.										
21	1405	<100	<3	<10	<30	<40	<20	<20		<10
APR.										
22	1005	<100	<3	<10	<30	<40	<20	<20		<10
JUNE										
02	1905	<10		<5	<1		15		<1000	7

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS AND PARTICLE-SIZE DISTRIBUTION, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: 3. BOTTOM MITHORANAL TUBE; C, CHENICALLY DISPERSED; N, IN ANAIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; N; IN DISTILLED WATER)

			WATER						PARTICLE SIZE									
	DATE	T I ME	TEM- PERA- TURE ( C)	DISCHARGE (CFS)	TRATION.	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)						.062						ANALY-
AUG	7, 1970 7 8	1615 1330 1830	29.0 27.0 28.0	14 25 19	13 602 45	41 2.3	65 	75		87	==	98	99	98	100			SPWC

#### 09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ.

LOCATION. -- Lat 32°52'06", long 109°30'38", in SE[NE] sec.31, T.6 S., R.28 E., Graham County, at gaging station 0.6 mile downstream from intake of Brown Canal, 8 miles northeast of Solomon, and 17 miles downstream from San Francisco River.

DRAINAGE AREA, -- 7,896 sq mi.

PERIOD OF RECORD. -- Specific conductance: January 1965 to September 1970. Water temperatures: January 1965 to September 1970. Sediment records: February 1965 to September 1970.

#### EXTREMES, -- 1969-70;

KEMEN. --1999-70:
Specific conductance: Maximum daily, 2,020 micromhos July 17; minimum daily, 410 micromhos Aug. 6.
Water temperatures: Maximum, 34,5°C July 17; minimum 4.0°C Jan. 8,
Sediment concentrations: Maximum daily, 38,400 mg/l July 21; minimum daily, 6 mg/l July 10.
Sediment discharge: Maximum daily, 92,600 tons Aug. 6; minimum daily, 0.62 ton July 10.

Period of record:
Specific conductance (1967-70): Maximum daily, 2,020 micromhos July 17, 1970; minimum daily, 260 micromhos Feb. 15, 28, 29, Apr. 4, 1968.
Water temperatures (1967-70): Maximum, 34.5°C July 17, 1970; minimum, 2.0°C Dec. 20, 21, 1967.
Sediment concentrations: Maximum daily, 52,000 mg/l July 28, 1967; minimum daily, 5 mg/l June 23, 1969.
Sediment discharge: Maximum daily, 1,900,000 tons Dec. 23, 1965; minimum daily, 0.59 ton June 23, 1969.

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	ост	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	1020	890	875	900	890	890	890	1100	1400	1000	1200
2	1220	980	920	875	900	890	850	860	1100	1300	575	1000
3	1220	980	920	900	975	1000	800	900	1300	1350	625	1100
4	1300	1000	890	1000	900	475	900	900	1300	1250	650	1000
5	1280	1020	850	1000	900	545	830	910	1300	1280	575	1300
			_									950
6	1280	1020	1000	950	900	530	800	1000	1400	1250	410	950
7	1200	1030	1000	1000	910	560	830	970	1500	1350		
8	1200	1030	775	1020	910	610	830	970	1200	1400	650	800
9	1200	1030	820	1020	975	610	910	970	1400	1450	500	850
10	1200	1020	900	1020	1050	650	890	970	1400	1400	550	800
11	1280	1020	850	1000	1050	64D	890	900	1300	1400	525	850
12	1280	880	900	1000	1200	610	890	1000	1400	1500	575	900
13	1300	1010	850	900	975	600	890	1000	1450	1500	615	1100
14	1300	1010	800	900	975	620	890	1000	1450	1550	1200	1050
15	1320	1020	850	900	975	620	850	1000	1450	1580	1000	1200
												1200
16	1350	990	850	900	975	620	860	1050	1550	1820	910	
17	1300	990	850	950	975	630	830	950	1550	2020	1000	1050
18	1320	720	850	950	975	600	800	900	1500	1900	875	1000
19	1220	730	875	950	975	610	800	1000	1400	1700	875	460
20	1100	790	875	950	1100	640	800	1000	1420	1980	1350	550
21	1200	790	875	1000	1100	640	850	900	1420	775	1150	850
22	440	790	980	950	1000	690	850	900	1500	625	710	850
23	650	890	875	900	925	680	850	1000	1350	875	950	1000
24	880	890	875	900	1000	810	900	1000	1480	925	950	1100
25	880	890	850	910	990	810	900	1050	1500	1000	925	1100
26	910		850		990	810	900		1450	930	1260	1200
27	910	890		1000	890	800	900	1200	1400	775	910	1150
28		900	850	1010				1200	1400	775	1100	1200
29	810	900	850	900	890	800	900	1200	1400	650	1000	1000
30	800	870	900	900		750	890		1400	525	1000	950
31	900	890	800	875		750	890	1200		525 650	1050	930
31	1000		800	900		890		1100		920	1020	
AVG	1110	933	871	945	974	689	862	996	1390	1250	848	990

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ.--Continued

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY DCT YOV DEC JAV FEB MAY JUN JUL AUG SEP 16.0 16.0 16.0 7.0 7.0 6.0 7.0 13.0 13.0 12.0 9.0 13.0 14.0 11.0 18.0 11.0 20.0 15.0 18.0 20.0 26.0 27.0 27.5 25.5 25.0 25.5 32.5 28.0 23.5 30.0 26.0 23.0 24.5 29.5 25.D 7.0 9.0 30.0 25.5 23.0 23.5 26.0 23.0 23.0 23.0 7.0 12.0 12.0 10.0 3 4 5 17.0 10.0 13.0 23.0 30.0 23.0 24.0 24.0 23.0 22.0 17.0 18.0 17.0 7.0 7.0 4.0 7.0 6.0 14.0 14.0 15.0 14.0 14.0 11.0 14.0 15.0 20.0 20.0 21.0 19.0 20.0 24.5 26.5 26.0 27.0 28.0 10.0 9.0 10.0 27.0 24.0 24.0 21.0 30.0 29.0 30.0 25.5 23.0 21.0 23.0 28.0 22.0 21.0 25.0 24.0 29.0 17.0 10.0 16.0 24.5 22.0 22.0 20.0 22.0 21.0 11.0 7.0 11.0 11.0 11.0 12.0 12.0 12.0 11.0 14.0 13.0 14.0 14.0 20.0 20.0 19.0 18.0 25.0 25.5 25.0 22.0 24.0 22.0 28.0 23.0 26.0 27.5 30.0 22.5 30.5 32.0 24.0 11 12 13 14.0 26.0 23.5 14.0 15.0 14.0 15.0 15.0 16.0 15.0 15.0 28.5 25.5 26.5 31.0 14 30.0 12.0 14.0 13.0 10.0 14.0 16.0 14.0 14.0 20.0 15.0 17.0 17.0 30.0 34.5 32.0 31.0 28.5 26.5 30.0 16.0 16.0 15.0 15.0 16 17 17.0 17.0 11.0 19.0 25.0 25.0 18.0 19.0 18.0 15.0 12.0 24.5 25.0 27.0 30.0 24.0 26.0 19 6.0 13.0 28.0 28.0 10.0 20 19.0 27.0 29.0 26.0 30.5 32.5 31.0 32.0 19.0 26.0 25.0 24.0 26.0 21 22 23 18.0 13.0 17.0 19.0 9.0 12.0 12.0 13.0 14.0 13.0 14.0 13.0 13.0 12.0 15.0 17.0 17.0 20.0 19.0 20.0 22.0 21.0 26.5 28.0 26.5 21.5 23.0 24.0 29.0 27.0 29.5 24.5 13.0 9.0 24.0 12.0 14.0 13.0 13.0 13.0 12.0 13.0 15.0 19.0 24.5 21.0 20.0 16.0 26 27 28 29 20.0 17.0 18.0 17.0 14.0 10.0 8.0 7.0 12.0 14.0 16.0 15.0 12.0 14.0 16.0 20.0 28.5 25.0 28.0 22.5 25.0 25.0 27.5 27.0 30.0 22.5 29.5 30.5 30.0 25.0 26.5 32.0 26.0 11.0 7.0 7.5 8.0 7.0 19.0 19.0 16.0 29.5 30.0 20.0 20.0 17.0 16.5 22.0 23.5 11.0 30 31 17.0 8.0 9.0 16.0 16.0 29.0 30.0 AVC 20.0 13.5 10.5 10.0 13.5 14.0 18.0 23.5 27.5 27.0 27.0 24.5

#### SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEY- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)
1	54	22	3.2	101	128	35	155	74	31
2	58	26	4.1	103	89	25	158	83	35
3	55	22	3.3	105	74	21	161	100	43
•	54	19	2.8	103	54	15	184	121	60
5	57	17	2.6	103	64	18	229	265	164
6	61	20	3.3	103	38	11	265	402	288
7	62	16	2.7	98	23	6.1	245	382	253
8	62	19	3.2	91	17	4.2	237	357	228
9	64	13	2.2	94	22	5.6	229	302	187
10	58	14	2.2	95	19	4.9	225	234	142
11	58	12	1.9	110	21	6.2	205	197	109
12	60	11	1.8	105	26	7.4	198	152	81
13	60	14	2.3	100	27	7+3	188	122	62
14	56	8	1.2	98	29	7.7	198	175	94
15	54	9	1.3	99	21	5.6	188	178	90
16	55	8	1.2	118	47	15	180	153	73
17	56	15	2.3	151	85	35	191	174	90
18	56	40	6.0	316	296	253	188	96	49
19	56	19	2.9	217	260	152	180	95	46
20	61	18	3.0	237	440	282	177	59	28
21	144	375	276	194	450	236	160	71	31
22	501	3510	4970	174	220	103	155	73	31
23	230	1120	696	167	138	62	154	71	30
24	156	382	161	161	110	48	150	98	40
25	144	380	148	152	119	49	159	108	46
26	141	284	108	146	99	39	168	97	44
27	128	160	55	143	82	32	174	1,08	51
28	118	180	57	143	84	32	181	115	56
29 30	140 113	189	71	152	94	39	202	133	73
		170	52	152	81	33	203	116	64
31	103	182	51				197	94	50
TOTAL	3075		6698.5	4131		1590.0	5884		2669

FEBRUARY

MEAN CONCEN-TRATION (MG/L)

SEDIMENT DISCHARGE (TONS/DAY)

249

SEDIMENT DISCHARGE (TDNS/DAY)

179.8

MARCH

MEAN CONCEN-TRATION (MG/L)

MEAN DISCHARGE (CFS)

### 09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

MEAN DISCHARGE (CFS)

JANUARY

MEAN CONCEN-TRATION (MG/L)

SEDIMENT OISCHARGE (TONS/DAY)

MEAN DISCHARGE (CFS)

DAY

TOTAL

5505

1284

3928

417.3

1614

UAT	10737	(76/1)	(TUMS/UAT)	1653	(MG/L)	( TUNS/UAY)	(UFS)	(46/L)	( I UNS/UNT I
1	183	100	49	144	67	26	156	210	88
ž	166	70	31	144	61	24	168	195	88
3	151	73	30	149	64	26	329	688	724
ă.	154	92	38	152	75	31	430	1100	1280
5	157	111	47	154	86	36	475	2150	2760
							• • • •		
6	152	84	34	141	60	23	458	1953	2410
7	155	58	24	139	50	19	428	1090	1260
8	149	82	33	138	49	18	380	750	770
9	150	82	33	134	41	15	350	570	539
10	151	78	32	139	38	14	326	520	458
						• •			
11	148	111	44	139	51	19	344	495	460
12	161	105	46	136	33	12	344	415	385
13	161	147	64	135	43	16	364	480	472
14	158	105	45	126	28	9.5	354	390	373
15	162	88	38	126	28	9.5	321	354	307
16	172	98	46	122	35	12	303	382	313
17	180	112	54	119	49	16	317	370	317
18	178	121	58	118	37	12	349	395	372
19	174	117	55	120	53	17	354	405	387
20	173	119	56	127	49	17	364	295	290
21	174	115	54	134	51	18	330	247	220
22	168	110	50	137	60	22	307	249	206
23	160	95	41	140	95	36	294	249	198
24	154	76	32	146	39	15	282	260	198
25	153	88	36	147	84	33	266	205	147
26	156	86	36	153	92	38	250	210	142
27	153	64	26	159	300	129	242	150	98
28	147	70	28	156	360	152	242	185	121
29	150	58	23				242	142	93
30	150	74	30				250	145	98
31	145	78	31				246	202	134
FOTAL	4945		1244	3874		815.0	9865		15708
				2011		02300			
		APRIL			MAY			JUNE	
	MEAN	MEAN	SEDIMENT	MFAN	MEAN	SEDIMENT	MEAN	MEAN	SEDIMENT
	MEAN Discharge	MEAN CONCEN-	SEDIMENT Discharge	MEAN DISCHARGE	MEAY CDNCEN-	SEDIMENT Discharge	MEAN Discharge	MEAN CONCEY-	SEDIMENT DISCHARGE
DAY	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- Tration	DISCHARGE	DISCHARGE	MEAN CONCEY- TRATION	DISCHARGE
DAY		MEAN CONCEN-	SEDIMENT DISCHARGE (TUNS/DAY)	MEAN Discharge (CFS)	MEAY CDNCEN-	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN Discharge (CFS)	MEAN CONCEY-	SEDIMENT DISCHARGE (TONS/DAY)
	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE	MEAN CONCEY- TRATION	DISCHARGE (TDNS/DAY)
1	DISCHARGE (CFS) 238	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 104	DISCHARGE (CFS) 163	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 29	DISCHARGE (CFS) 81 81	MEAN CONCEY- TRATION (MG/L) 22 18	DISCHARGE (TONS/DAY) 4.8 3.9
1 2	DISCHARGE (CFS) 238 234	MEAN CONCEN- TRATION (MG/L) 162 162	DISCHARGE (TOMS/DAY) 104 102	DISCHARGE (CFS) 163 160	MEAN CDNCEN- TRATION (MG/L) 65 55	DISCHARGE (TONS/DAY) 29 24	DISCHARGE (CFS)	MEAN CONCEY- TRATION (MG/L)	DISCHARGE (TONS/DAY) 4.8 3.9
1 2 3 4	DISCHARGE (CFS) 238	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY) 104	DISCHARGE (CFS) 163 160 145	MEAN CDNCEN- TRATION (MG/L) 65 55 40	DISCHARGE (TONS/DAY) 29	DISCHARGE (CFS) 81 81	MEAN CONCEY- TRATION (MG/L) 22 18	DISCHARGE (TDNS/DAY)
1 2 3	DISCHARGE (CFS) 238 234 218	MEAY CONCEN- TRATION (MG/L) 162 162 115	DISCHARGE (TONS/DAY) 104 102 68	DISCHARGE (CFS) 163 160	MEAN CDNCEN- TRATION (MG/L) 65 55	DISCHARGE (TONS/DAY) 29 24 16	DISCHARGE (CFS) 81 81 72	MEAN CONCEY- TRATION (MG/L) 22 18 29	DISCHARGE (TONS/DAY) 4.8 3.9 5.6
1 2 3 4 5	238 234 218 200 203	MEAV CONCEN- TRATION (MG/L) 162 162 115 56 110	DISCHARGE (TONS/DAY) 104 102 68 3D 60	DISCHARGE (CFS) 163 160 145 137	MEAY CDNCEN- TRATION (MG/L) 65 55 40 34	DISCHARGE (TONS/DAY) 29 24 16 13	DISCHARGE (CFS) 81 81 72 68	MEAN CONCEY- TRATION (MG/L) 22 18 29 18 26	DISCHARGE (TONS/DAY) 4.8 3.9 5.6 3.3 4.6
1 2 3 4 5	238 234 218 200 203	MEAV CONCEN- TRATION (MG/L) 162 162 115 56 110	DISCHARGE (TONS/DAY) 104 102 68 3D 60	DISCHARGE (CFS) 163 160 145 137 145	MEAN CDNCEN- TRATION (MG/L) 65 55 40 34 45	DISCHARGE (TONS/DAY) 29 24 16 13 18	DISCHARGE (CFS) 81 81 72 68 66	MEAN CONCENTRATION (MG/L) 22 18 29 18 26	DISCHARGE (TDNS/DAY) 4.8 3.9 5.6 3.3 4.6
1 2 3 4 5	DISCHARGE (CFS) 238 234 218 200 203 218 196	MEAN CONCEN- TRATION (MG/L) 162 162 115 56 110	DISCHARGE (TOMS/DAY) 104 102 68 3D 60 56	DISCHARGE (CFS) 163 160 145 137 145	MEAN CDNCEN- TRATION (MG/L) 65 55 40 34 45	DISCHARGE (TONS/DAY)  29  24  16  13  18	DISCHARGE (CFS) 81 81 72 68 66	MEAN CONCEY- TRATION (MG/L) 22 18 29 18 26	DISCHARGE (TDNS/DAY)  4.8 3.9 5.6 3.3 4.6
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 238 234 218 200 203 218 196	MEAN CONCEN- FRATION (MG/L) 162 162 115 56 110 95 86 72	DISCHARGE (TOMS/DAY) 104 102 68 3D 60 56 46 38	DISCHARGE (CFS) 163 160 145 137 145 139 139	MEAN CONCEN- TRATION (MG/L) 65 55 40 34 45	DISCHARGE (TONS/DAY) 29 24 16 13 18	DISCHARGE (CFS) 81 81 72 68 66 62 56	MEAN CONCEY- TRATION (MG/L) 22 18 29 18 26 17 22 24	DISCHARGE (TDNS/DAY)  4.8 3.9 5.6 3.3 4.6 2-8 3.3 4.0
1 2 3 4 5 6 7 8	DISCHARGE (CFS)  238 234 218 200 203 218 196 196	MEAN CONCEN- TRATION (MG/L) 162 115 56 110 95 86 72 54	DISCHARGE (TONS/DAY) 104 102 68 3D 60 56 46 38 27	DISCHARGE (CFS) 163 160 145 137 145 139 139 131	MEAN CONCEN- TRATION (MG/L) 65 55 40 34 45 34 36 36	DISCHARGE (TDNS/DAY) 29 24 16 13 18 13 14 13	DISCHARGE (CFS) 81 81 72 68 66 62 56 62 68	MEAN CONCEN- TRATION (MG/L) 22 18 29 18 26 17 22 24	DISCHARGE (TONS/DAY) 4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0
1 2 3 4 5 6 7 8	DISCHARGE (CFS) 238 234 218 200 203 218 196	MEAN CONCEN- FRATION (MG/L) 162 162 115 56 110 95 86 72	DISCHARGE (TOMS/DAY) 104 102 68 3D 60 56 46 38	DISCHARGE (CFS) 163 160 145 137 145 139 139	MEAN CONCEN- TRATION (MG/L) 65 55 40 34 45	DISCHARGE (TONS/DAY) 29 24 16 13 18	DISCHARGE (CFS) 81 81 72 68 66 62 56	MEAN CONCEY- TRATION (MG/L) 22 18 29 18 26 17 22 24	DISCHARGE (TDNS/DAY)  4.8 3.9 5.6 3.3 4.6 2-8 3.3 4.0
1 2 3 4 5 6 7 8 9	DISCHARGE (CFS)  238 234 218 200 203  218 196 196 184 174	MEAV CONCEN- TRATION (MG/L) 162 115 56 110 95 86 72 54 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37	DISCHARGE (CFS) 163 160 145 137 145 139 139 131 131	MEAY CONCEN- TRATION (MG/L) 65 55 40 34 45 36 36 30 31	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  13  11	DISCHARGE (CFS)  81  81  72  68  66  62  56  62  68  73	MEAN CONCEN- TRATION (MG/L) 22 18 29 18 26 17 22 24 24 22	DISCHARGE (TONS/DAY) 4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4
1 2 3 4 5 6 7 8 9	OISCHARGE (CFS) 238 234 218 200 203 218 196 196 184 174	MEAN CONCEN- TRATION (MG/L) 162 162 162 115 56 110 95 72 54 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37	DISCHARGE (CFS)  163 160 145 137 145 139 139 131 133	MEAN CDNCENTRATION (MG/L) 65 55 40 34 45 36 36 30 31 33	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  19  11	DISCHARGE (CFS) 81 72 68 66 62 62 62 68 73	MEAN CONCENTRATION (MG/L)  22 18 29 18 26 17 22 24 22	DISCHARGE (TDNS/DAY) 4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4
1 2 3 4 5 6 7 8 9 10	OISCHARGE (CFS)  238 234 218 200 203  218 196 196 184 174	MEAN CONCENTRATION (MG/L)  162 162 165 160 110 95 86 72 54 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37	DISCHARGE (CFS)  163 160 145 137 145 139 139 131 131 133	MEAN CDNCEN-TRATION (MG/L)  65 55 40 34 45 36 36 30 31	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  13  11  11	DISCHARGE (CFS) 81 81 72 68 66 62 56 62 68 73	MEAN CONCEY-TRATION (MG/L)  22 18 29 18 26 17 22 24 22 65	DISCHARGE (TONS/DAY) 4.8 3.9 5-6 3-3 4.6 2-8 3-3 4.0 4.4 4.3
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 194 174 173 164 162	MEAN CONCEN- TRATION (MG/L) 162 162 162 162 115 56 110 95 86 72 54 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42	DISCHARGE (CFS)  163 160 145 137 145 139 139 131 131 133 129 132	HEAN CDNCEN- TRATION (MG/L) 65 55 40 34 45 36 36 36 36 36 37 31 32 41	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  13  11  11  12  11	DISCHARGE (CFS)  81 81 72 68 66 62 56 62 68 73	MEAN CONCEY- TRATION (MG/L)  22 18 29 18 26 17 22 24 24 24 24 25	DISCHARGE (TONS/DAY) 4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 3.3 12 8.2 8.0
1 2 3 4 5 6 7 8 9 10 11 12 13	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164	MEAN CONCENTRATION (MG/L)  162 162 165 166 110 95 86 72 54 78 71 42 96 71	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31	DISCHARGE (CFS)  163 160 145 137 145 139 131 131 133 129 132 132 138	MEAN CDNCEN-TRATION (MG/L)  65 55 40 34 45 36 36 36 30 31	DISCHARGE (TONS/DAY)  29  24  16  13  14  13  11  11  12  11  15  21	DISCHARGE (CFS)  81 81 72 68 66 62 56 62 73 66 62 58 73	MEAN CONCEY- TRATION (MG/L)  22 18 29 18 26 17 22 24 24 24 25 65 49 51	DISCHARGE (TONS/DAY) 4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.0 5.3
1 2 3 4 5 6 7 8 9 10	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 194 174 173 164 162	MEAN CONCEN- TRATION (MG/L) 162 162 162 162 115 56 110 95 86 72 54 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42	DISCHARGE (CFS)  163 160 145 137 145 139 139 131 131 133 129 132	HEAN CDNCEN- TRATION (MG/L) 65 55 40 34 45 36 36 36 36 36 37 38 39 41	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  13  11  11  12  11	DISCHARGE (CFS)  81 81 72 68 66 62 56 62 68 73	MEAN CONCEY- TRATION (MG/L)  22 18 29 18 26 17 22 24 24 24 24 25	DISCHARGE (TONS/DAY) 4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 3.3 12 8.2 8.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176	MEAV CONCEN- FRATION (MG/L) 162 115 56 110 95 86 72 54 78 71	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31	DISCHARGE (CFS)  163 160 145 137 145 139 131 131 133 129 132 138 138	MEAV CONCENTRATION (MG/L) 65 55 40 34 45 36 36 36 36 36 36 36 36 36 36 36 36 36	DISCHARGE (TONS/DAY)  29  24  16  13  14  13  11  11  12  11  15  21	DISCHARGE (CFS)  81 81 72 68 66 62 56 62 56 73 66 62 58 73	MEAN CONCEPT RATION (MG/L) 22 18 29 18 26 17 22 24 24 22 56 49 51 38 44	DISCHARGE (TONS/DAY) 4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.0 5.3 5.2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176	MEAV CONCENT (MG/L) 162 162 115 56 110 95 86 72 57 87 71 42 96 71 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50	DISCHARGE (CFS) 163 160 145 137 145 139 139 131 131 131 133 129 132 138 138	MEAV CONCENTRATION IMG/LI 65 55 40 34 45 36 36 30 31 33 32 41 56 35	DISCHARGE (TONS/DAY)  29 24 16 13 18 13 14 13 11 11 11 12 11 15 21 13 16	DISCHARGE (CFS) 81 81 72 68 66 62 66 62 68 73 66 62 58 52 44	MEAN CONCENTRATION (MG/L) 22 18 29 18 26 17 22 24 24 24 24 24 25 65 49 51 38 44	DISCHARGE (TOMS/DAY) 4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.2 8.2 5.3
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 165 190 189	MEAV CONCERT FRATION (MG/L) 162 162 162 115 56 110 95 72 74 78 71 78 71 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69	DISCHARGE (CFS)  163 160 145 137 145 139 131 131 133 133 138 138 138	MEAY CDNCENTRATION (MG/L) 55 55 40 34 45 36 36 30 31 33 32 41 56 35	DISCHARGE (TONS/DAY)  29  24  16  13  14  13  11  11  11  12  11  15  21  13  16	DISCHARGE (CFS)  81 81 72 68 66 62 56 62 68 73 66 62 58 44 48	MEAN_CONCEY_ CONCEY_ TRATION (MG/L) 22 18 29 18 26 17 22 24 24 22 65 49 51 38 44	DISCHARGE (TONS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.0 5.3 5.2 5.3 5.3
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176 190 189 204	MEAV CONCENT (MG/L) 162 162 115 56 110 95 87 72 54 78 71 42 96 71 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61	DISCHARGE (CFS) 163 160 145 137 145 139 139 131 131 131 133 129 132 138 138 138 138 138	MEAY CDNCEN- TRATION 1MG/L1 65 55 55 40 34 45 36 36 30 31 33 32 41 56 35	DISCHARGE (TONS/DAY)  29 24 16 13 18 13 14 13 11 11 11 12 11 15 21 13 16 17 16	DISCHARGE (CFS) 81 81 72 68 66 62 66 62 68 73 66 62 58 52 44	MEAN CONCEIV-N (MG/L) (MG/L) (MG/L) (22 18 29 18 26 17 22 24 24 24 24 24 24 24 24 24 24 24 24	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.2 8.0 5.3 5.2 5.3 5.3 2.6
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176 190 189 204 206	MEAV CONCERT FRATION (MG/L) 162 162 162 115 56 110 95 72 74 78 71 78 97 71 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50	DISCHARGE (CFS) 163 160 145 137 145 139 131 131 131 133 129 132 138 138 138 138 135 138 138	MEAY CDNCENTRATION (MG/L) 55 55 40 34 45 36 36 30 31 33 32 41 56 35	DISCHARGE (TONS/DAY)  29  24  16  13  14  19  11  11  12  11  15  21  13  16  17  16	DISCHARGE (CFS)  81 81 81 72 68 66 62 56 62 68 73 66 62 58 44 48 46 46 43	MEAN—CONCENTRATION (MG/L)  22 18 29 18 26 17 22 24 24 22 65 49 51 38 44 41 25	DISCHARGE (TONS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.0 5.3 5.2 5.3 5.2 5.3 5.2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176 190 189 204	MEAV CONCENT (MG/L) 162 162 115 56 110 95 87 72 54 78 71 42 96 71 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61	DISCHARGE (CFS) 163 160 145 137 145 139 139 131 131 131 133 129 132 138 138 138 138 138	MEAY CDNCEN- TRATION 1MG/L1 65 55 55 40 34 45 36 36 30 31 33 32 41 56 35	DISCHARGE (TONS/DAY)  29 24 16 13 18 13 14 13 11 11 11 12 11 15 21 13 16 17 16	DISCHARGE (CFS) 81 81 72 68 66 62 66 62 68 73 66 62 58 52 44	MEAN CONCEIV-N (MG/L) (MG/L) (MG/L) (22 18 29 18 26 17 22 24 24 24 24 24 24 24 24 24 24 24 24	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.2 8.0 5.3 5.2 5.3 5.3 2.6
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176 190 189 204 206 194	MEAV CONCENT (MG/L) 162 162 115 56 110 95 86 72 54 78 71 78 71 78 96 71 78	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39	DISCHARGE (CFS) 163 160 145 137 145 139 131 131 133 138 138 135 138 138 135 138	MEAY CONCENTRATION (MG/L) 65 55 40 34 45 36 36 31 32 41 56 35 44 46 44 39 43	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  19  11  11  12  11  15  21  13  16  17  16  14  15	DISCHARGE (CFS)  81 81 72 68 66 62 55 62 68 73 66 62 58 52 44 48 46 46 43 39	MEAN—CONCENTRATION (MG/L)  22 18 29 18 26 17 22 24 24 24 22 66 69 51 38 44 41 21 25 36	DISCHARGE (TONS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.0 5.3 5.2 5.3 5.2 5.3 5.3 2.6 2.9 3.8
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176 190 189 204 206 194	MEAV CONCENT (MG/L) 162 162 115 56 110 95 86 72 57 87 71 42 96 71 18 97 131 18 97	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39	DISCHARGE (CFS) 163 160 145 137 145 139 139 131 131 131 133 129 132 138 138 138 135 138 135 138 135 136 137 137 138 138 138 137 138 138 138 138 138 138 138 138 138 138	MEAY CDNCENTRATION 1Mg/L1 65 55 55 40 34 45 36 30 31 33 32 41 56 35 44 46 44 46 44 46 43 43	DISCHARGE (TONS/DAY)  29 24 16 13 18 13 14 13 11 11 11 12 11 15 21 13 16 17 16 14 15 11	DISCHARGE (CFS)  81  81  72  68  66  62  56  62  68  73  66  62  58  52  44  48  46  43  39  36	MEAN CONCETUN (MG/L) (MG/L) (22 18 29 18 26 17 222 24 24 22 26 65 49 91 38 44 41 43 21 25 36 27	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.2 8.2 8.2 5.3 5.3 5.3 2.6 2.9 3.8 2.6
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 165 190 189 204 206 194 177 163	MEAV CONCENT TRATION (MG/L) 162 162 162 115 56 110 95 86 72 54 78 71 78 71 78 96 71 78 97 74	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 39 27 37 33 19 42 31 37 50 69 61 50 39	DISCHARGE (CFS) 163 160 145 137 145 139 131 131 133 138 138 138 138 138 138 138	MEAY CONCENTRATION (MG/L) 65 55 40 34 45 36 36 36 37 1 32 41 56 44 45 47 47 47 47 47 47 47 47 47 47 47 47 47	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  13  11  11  12  11  15  21  13  16  17  16  14  15  13  11	DISCHARGE (CFS)  81 81 72 68 66 62 55 62 68 73 66 62 55 44 48 46 43 39	MEAN CONCENT ATTION (MG/L)  22 18 29 18 26 17 22 24 24 24 22 66 69 51 38 44 41 21 25 36 27 22	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.0 5.3 5.2 5.3 5.3 2.6 2.9 3.8
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176 199 204 206 194 177 163	MEAV CONCENT (MG/L) 162 162 115 56 110 95 86 72 54 87 71 42 96 71 18 97 131 111 18 97	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39 40 24 21	DISCHARGE (CFS) 163 160 145 137 145 139 139 131 131 133 129 132 138 138 138 135 138 136 137 137 138 138 138 138 138 139 130 131 131 131 131 131 132 132 133	MEAY CDNCENTRATION 1Mg/L1 65 55 55 40 34 45 36 30 31 33 32 41 56 35 44 46 44 46 44 46 43 33	DISCHARGE (TONS/DAY)  29 24 16 13 18 13 14 13 11 11 11 12 11 15 21 13 16 17 16 17 16 17 16 14 15	DISCHARGE (CFS)  81  81  72  68  66  62  56  62  68  73  66  62  58  52  44  48  46  43  39  36  33  35	MEAN CONCEIUM (MG/L) (MG/L) (22 18 29 18 26 17 222 24 24 22 26 65 49 91 38 44 41 43 21 25 66 27 22 15	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.2 8.2 8.2 5.3 5.3 2.6 2.9 3.8 2.6 2.0 1.4
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	DISCHARGE (CFS)  238 234 218 200 203 218 106 196 184 174 173 164 162 164 176 190 189 204 206 194 177 163 156 164	MEAV CONCENT (MG/L) 162 115 56 110 95 86 72 54 78 71 78 71 78 96 71 78 97 74 84 96 74 96 74 96 74 96 74 96 74 96 74 96 74 96 74 96 74 96 74 96 96 96 96 96 96 96 96 96 96 96 96 96	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39 40 24 21 26	DISCHARGE (CFS) 163 160 145 137 145 139 131 131 133 129 132 138 138 138 135 138 135 136 136 116 126 116	MEAY CONCENTRATION (MG/L) 65 55 40 34 45 36 36 36 37 1 56 44 45 37 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  13  11  11  15  21  13  16  17  16  14  15  13  11  10	DISCHARGE (CFS) 81 81 72 68 66 62 56 62 68 73 66 62 58 44 48 48 48 49 39 36 33 35 43	MEAN_CONCEY_ CONCEY_ CONCEY_ MEG/L1  22 18 26 17 22 24 24 22 66 49 51 38 44 41 21 25 36 27 22 15 20	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.0 5.3 5.2 5.3 5.3 2.6 2.9 3.8 2.6 2.0 1.4 2.3
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176 199 204 206 194 177 163	MEAV CONCENT (MG/L) 162 162 115 56 110 95 86 72 54 87 71 42 96 71 18 97 131 111 18 97	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39 40 24 21	DISCHARGE (CFS) 163 160 145 137 145 139 139 131 131 133 129 132 138 138 138 135 138 136 137 137 138 138 138 138 138 139 130 131 131 131 131 131 132 132 133	MEAY CDNCENTRATION 1Mg/L1 65 55 55 40 34 45 36 30 31 33 32 41 56 35 44 46 44 46 44 46 43 33	DISCHARGE (TONS/DAY)  29 24 16 13 18 13 14 13 11 11 11 12 11 15 21 13 16 17 16 17 16 17 16 14 15	DISCHARGE (CFS)  81  81  72  68  66  62  56  62  68  73  66  62  58  52  44  48  46  43  39  36  33  35	MEAN CONCEIUM (MG/L) (MG/L) (22 18 29 18 26 17 222 24 24 22 26 65 49 91 38 44 41 43 21 25 66 27 22 15	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.2 8.2 8.2 5.3 5.3 2.6 2.9 3.8 2.6 2.0 1.4
1 2 3 4 5 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 165 190 189 204 206 194 177 163 156 164 160	MEAV CONCENT TRATION (MG/L) 162 115 56 110 95 86 72 54 78 71 78 96 71 78 97 136 111 84 44 49 59 62	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39 40 24 21 26 27	DISCHARGE (CFS) 163 160 145 137 145 139 131 131 133 129 132 138 138 138 135 138 135 136 146 126 116 106	MEAY CONCENTRATION 1 Mg/L1	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  13  11  11  15  21  13  16  17  16  14  15  13  11  10  13  11  11  10  13	DISCHARGE (CFS) 81 81 72 68 66 62 56 62 68 73 66 62 58 73 66 62 58 73 66 62 58 73 66 62 58 73 66 62 68 73 66 68 73 68 68 73 68 68 73 68 68 73 68 68 73 68 68 73 68 68 73 68 68 73 68 68 73 68 68 73 68 73 68 73 68 73 68 73 73 74 74 74 74 74 74 74 74 74 74 74 74 74	MEAN CONCENT ATTION (MG/L)  28 18 29 18 26 17 22 24 24 24 22 66 69 51 38 44 41 21 22 56 27 27 27 27 20 46	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.0 5.3 5.2 5.3 5.3 2.6 2.9 3.8 2.6 2.0 1.4 2.3 5.0
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 25 26	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176 190 189 204 206 194 177 163 156 164 160 157	MEAV CONCERT TRATION (MG/L) 162 162 165 166 110 95 86 72 54 78 71 42 96 71 78 71 136 111 89 74 84 54 95 96 97	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39 40 24 21 26 27	DISCHARGE (CFS) 163 160 145 137 145 139 139 131 131 131 133 129 132 138 138 138 135 138 135 136 137 146 146 146 146 146 146 146 146 146	MEAY CONCENTRATION 1MG/L1 65 55 55 40 34 36 30 31 33 32 41 56 55 55 44 46 44 46 44 47 48 48 48 49 49 49 49 49 49 49 49 49 49 49 49 49	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  13  11  11  15  21  13  16  17  16  14  15  13  11  10  13  11  11  10  13	DISCHARGE (CFS)  81  81  72  68  66  62  56  62  58  52  44  48  46  43  39  36  33  35  43  40	MEAN—CONCETTATION (MG/L)  22 18 29 18 26 17 22 24 22 24 22 24 22 25 66 49 51 38 44 41 43 21 25 36 27 22 27 22 26 26 27 22 27 22 26 26 28 28 28 28 28 28 28 28 28 28 28 28 28	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.2 8.2 8.2 5.3 5.2 2.6 2.9 3.8 2.6 2.0 1.4 2.3 5.0 2.6
1 2 3 4 5 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	DISCHARGE (CFS)  238 234 218 200 203 218 106 196 184 174 173 164 162 164 176 190 189 204 206 194 177 163 156 164 160	MEAV CONCENT TRATION (MG/L) 162 115 56 110 95 86 72 54 78 71 78 96 71 78 97 136 111 84 49 99 99 99 99 99 99 99 99 99 99 99 99	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39 40 24 21 26 27	DISCHARGE (CFS) 163 160 145 137 145 139 139 131 131 133 129 132 138 138 138 135 138 135 136 146 166 106	MEAY CONCENTRATION (MG/L) 65 55 40 34 45 36 36 37 1 32 41 56 35 44 46 49 39 43 47 40 0 34 47	DISCHARGE (TONS/DAY)  29  24  16  13  18  13  14  13  11  11  15  21  13  16  17  16  14  15  13  11  10  13  11  11  19  19  19  10  13	DISCHARGE (CFS)  81 81 72 68 66 62 56 62 68 73 66 62 58 73 66 62 58 73 66 64 48 48 48 48 48 49 39 36 33 35 40 40	MEAN CONCENT ATTION (MG/L)  22 18 29 18 26 17 22 24 24 22 66 69 51 38 44 41 21 22 56 27 27 27 20 46	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.6 4.9 3.2 8.0 5.3 5.2 5.3 5.3 2.6 2.9 3.8 2.6 2.0 1.4 2.3 5.0 2.6 4.9
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 25 26 27 28	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176 190 189 204 206 194 177 163 156 164 160 157 160	MEAV CONCERT TRATION (MG/L) 162 115 56 110 95 86 72 54 78 71 42 96 71 78 97 136 111 89 74 84 54 95 96 27 86 86 77 86 86 77 86 86 86 86 86 86 86 86 86 87 87 88 88 88 88 88 88 88 88 88 88 88	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39 40 24 21 26 27 36 30 34	DISCHARGE (CFS) 163 163 160 145 137 145 139 139 131 131 133 129 132 138 138 138 135 138 135 136 137 147 147 147 147 147 147 147 147 147 14	MEAV CDNCENON (NG/L) 55 40 34 45 36 36 36 37 31 32 41 46 46 46 43 43 43 43 43 43 44 46 46 46 47 48 48 48 48 48 48 48 48 48 48 48 48 48	DISCHARGE (TONS/DAY)  29 24 16 13 18 13 14 13 11 11 11 12 11 15 21 13 16 17 16 17 16 14 15 11 10 13 11 11 10 13 11 10 9.0	01SCHARGE (CFS)  81  81  72  68  66  62  56  62  58  52  44  48  46  43  39  36  33  35  40  40  50	MEAN—CONCETTATION (MG/L)  22 18 29 18 26 17 22 24 22 24 22 24 22 25 66 49 51 38 44 41 43 21 25 36 27 22 27 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 25 26 26 27 22 26 27 22 27 22 26 27 22 27 22 27 22 26 26 27 27 28 27 29 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 3.3 4.6 3.3 4.0 4.4 4.3 12 8.2 8.2 8.2 5.3 5.2 5.3 5.3 6.4 2.9 3.8 2.6 2.9 1.4 2.3 5.2 6.9 7.4
1 2 3 4 5 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	DISCHARGE (CFS)  238 234 218 200 203 218 106 106 106 107 164 174 173 164 162 164 176 199 204 206 194 177 163 156 160 157 160 163	MEAV CONCENT TRATION (MG/L) 162 115 56 110 95 86 72 54 78 71 78 96 71 78 97 136 111 181 84 49 59 62 84 74 85 86 76 77 87 87 87 87 87 87 87 87 87 87 87 87	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39 40 24 21 26 27 36 30 34	DISCHARGE (CFS) 163 160 145 137 145 139 139 131 131 133 129 132 138 138 138 135 138 135 136 136 146 166 106 105 98 101 98	MEAY CONCENTRATION (MG/L) 65 55 40 34 45 36 36 37 1 32 41 56 35 44 46 49 39 43 31 32 33 33 47 40 34 35 23 35 35 35 36 36 36 37 47 40 36 36 37 47 40 36 37 47 40 37	DISCHARGE (TONS/DAY)  29  24  16  13  14  13  11  11  12  11  15  21  13  16  17  16  14  15  11  11  10  13  11  11  10  13  11  10  10	DISCHARGE (CFS)  81  81  72  68  66  62  56  62  68  73  66  62  58  73  66  62  58  73  60  60  40  40  50  61	MEAN CONCENT ATTION (MG/L)  22 18 29 18 26 17 22 24 24 22 66 69 51 38 44 41 21 22 56 27 27 27 26 26 27 27 27 27 27 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 2.8 3.3 4.0 4.4 4.3 12 8.0 5.3 5.2 5.3 5.3 2.6 2.9 3.8 2.6 2.9 3.8 2.6 2.9 3.8 2.6 2.9 3.8 2.6 2.9 3.8 3.3 3.3 3.3
1 2 3 4 5 5 6 7 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 25 26 27 28	DISCHARGE (CFS)  238 234 218 200 203 218 196 196 184 174 173 164 162 164 176 190 189 204 206 194 177 163 156 164 160 157 160	MEAV CONCERT TRATION (MG/L) 162 115 56 110 95 86 72 54 78 71 42 96 71 78 97 136 111 89 74 84 54 95 96 27 86 86 77 86 86 77 86 86 77 86 86 86 86 86 86 87 87 88 88 88 88 88 88 88 88 88 88 88	DISCHARGE (TONS/DAY)  104 102 68 3D 60 56 46 38 27 37 33 19 42 31 37 50 69 61 50 39 40 24 21 26 27 36 30 34	DISCHARGE (CFS) 163 163 160 145 137 145 139 139 131 131 133 129 132 138 138 138 135 138 135 136 137 147 147 147 147 147 147 147 147 147 14	MEAV CDNCENON (NG/L) 55 40 34 45 36 36 36 37 31 32 41 46 46 46 43 43 43 43 43 43 44 46 46 46 47 48 48 48 48 48 48 48 48 48 48 48 48 48	DISCHARGE (TONS/DAY)  29 24 16 13 18 13 14 13 11 11 11 12 11 15 21 13 16 17 16 17 16 14 15 11 10 13 11 11 10 13 11 10 9.0	01SCHARGE (CFS)  81  81  72  68  66  62  56  62  58  52  44  48  46  43  39  36  33  35  40  40  50	MEAN—CONCETTATION (MG/L)  22 18 29 18 26 17 22 24 22 24 22 24 22 25 66 49 51 38 44 41 43 21 25 36 27 22 27 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 22 24 25 26 26 27 22 26 27 22 27 22 26 27 22 27 22 27 22 26 26 27 27 28 27 29 20 20 20 20 20 20 20 20 20 20 20 20 20	DISCHARGE (TOMS/DAY)  4.8 3.9 5.6 3.3 4.6 3.3 4.6 3.3 4.0 4.4 4.3 12 8.2 8.2 8.2 5.3 5.2 5.3 5.3 6.4 2.9 3.8 2.6 2.9 1.4 2.3 5.2 6.9 7.4

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRAFION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	42	84	9.5	122	3200	1050	52	50	7.0
2	46	97	12	434	33400	44100	55	75	11
3	49	92	12	336	12400	11200	61	55	9.1
4	58	86	13	316	14900	12700	67	90	16
5	52	54	7.6	246	13800	9170	79	99	21
6	44	32	3.B	1010	30700	92600	80	91	20
7	41	35	3.9	39.	14900	15900	88	99	24
8	36	17	1.7	363	7800	7640	111	325	97
9	40	35	3.8	313	3500	2960	90	222	54
10	38	6	•62	180	5000	2430	94	133	33
11	33	25	2.2	294	6100	4840	104	3500	983
12	32	18	1.6	216	4400	2570	79	1800	384
13	27	9	.66	189	2800	1430	61	550	120
14	27	12	.87	179	1910	923	69	400	75
15	27	16	1.2	174	1230	578	61	210	35
16	26	15	1.1	165	2080	927	61	93	15
17	26	20	1.4	156	2780	1170	53	53	7.6
18	24	11	-71	155	5480	2290	62	3850	1350
19	24	21	1.4	152	2190	899	317	30400	30900
20	38	1400	144	209	9930	8690	315	25400	21600
21	492	38400	56600	170	19000	8720	130	8600	3090
22	516	21000	37000	197	7230	3850	88	1100	261
23	164	4400	1950	146	2600	1020	73	1000	197
24,	168	12400	6290	134	2800	1010	65	183	32
25	148	6500	2600	145	4100	1610	63	147	25
26	124	3500	1170	110	1750	520	62	81	14
27	186	7700	3870	91	1200	295	56	59	B.9
28	196	10500	7240	77	630	131	58	33	5.2
29	271	24200	17700	73	220	43	68	118	22
30	246	11200	7440	67	130	24	68	68	12
31	144	4500	1750	56	97	15			
TOTAL	3405		143833.06	6871		241305	2710		59428.8

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

55808

475172.46

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, MATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHOD OF ANALYSIS: B, BOTTOM MITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED MATER)

				TEN-	•		SUSPENDED					PAKI	ICLE :	1175						
				PERA-				PERC	NT F	INER	THAN '	THE S	12E (1	IN MI	LLIMET	rers)	INOI	CATEO	METHOD OF ANALY~	
	DATE	•	TEME		(CFS)		(TONS/DAY)	.002	.604	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	SIS	
AUG	6,	1970	0735	22.4	2120	41700	239000	35	52		78		94	98	100				VOHE	

#### 09460200 FRYE CREEK AT THATCHER, ARIZ.

LOCATION.--Lat 32°50'00", long 109°45'39", in SW\(\frac{1}{4}\) sec.11, T.7 S., R.25 E., Graham County, at gaging station 1,300 ft downstream from Frye Creek detention dam and 1 mile south of Thatcher.

DRAINAGE AREA. -- 24.3 sq mi.

PERIOD OF RECORD, -- Sediment records: March 1963 to September 1970.

REMARKS, -- This station is operated in conjunction with a trap efficiency study of the Frye Creek detention reservoir. Results are published by flow event, as opposed to the normal procedure of reporting daily values.

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (WHERE NO MEAN CONCENTRATIONS ARE SHOWN, LOADS ARE COMPUTED FROM DISCHARGE-SEDIMENT LOAD CURVES)

DATE	FLOW EVENT NO.	OUTFLOW DURATION <sup>A</sup> (HOURS)	TOTAL OUTFLOW <sup>B</sup> (ACRE-FEET)	MEAN DISCHARGE FOR PERIOD (CFS)	MEAN CONCENTRATION (MG/L)	OUTFLOW SEDIMENT LOAD (TONS)
DCT. 20, 1969	68	6.0	4.0	8.2		37
NOV. 10	69	2.0	.1	-58		.3
DEC. 5	70	4.0	• 5	1.6	254	1.5
JULY 21, 1970	71	7.5	4.0	6.6		53
JULY 23-24	72	9.0	1.9	2.6	1,420	28
JULY 28	73	9.5	7.2	9.1		136
AUG. 15-16	74	19.5	8.7	5.3	1,910	87
AUG. 16-17	75	5.5	•7	1.5		3.7
SEP. 3	76	8.5	. 8	1.1		3.7
SEP. 12	77	9.5	8.1	10		149

A DURATION OF EVENT IS BASED ON TIME WHEN FLOW IS OVER 0.2 CFS. B EXCLUDING OUTFLOW BELOW 0.2 CFS.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM MITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN MATIVE WATER; P, PIPET, S, SIEVE; V, VISUAL ACCOMULATION TUBE; W, IN DISTILLED WATER)

		WATER								PAR	TICLE	SIZE					HET. 100
		PERA-	DISCHARGE	CONCEN-	SEDIMENT DISCHARGE	PERCE	ENT F	INER	THAN	THE S	IZE (	IN MI	LLIME.	TERS)	INDI	CATED	METHOD OF ANALY-
DATE	TIME	(°C)	(CFS)	(MG/L)	(TONS/DAY)	•002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	SIS
JUL 23 1970	1855	24.0	15	20100	814	45	65	83	95	100							PWC
JUL 23	1855	24.0	15	20100	814	2	7	24	95	100					~-		SPN
AUG 15	2125	23.0	41	7610	842	41	62	82	93	98	100						PWC
AUG 15	2125	23.0	41	7610	842	- Z	17	40		98	100						SPN

#### 09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ.

LOCATION. --Lat 31°37'33", long 110°10'26", in NEINEI sec.11, T.21 S., R.21 E., Cochise County, in Spanish land grant of San Juan de las Boquillas y Nogales, at gaging station at county highway bridge 0.3 mile south of Charleston, 1.5 miles upstream from Charleston Dam site, 9 miles upstream from Babocomari River, and 29 miles upstream from Benson.

DRAINAGE AREA. -- 1,219 sq mi, of which 696 sq mi is in Mexico.

PERIOD OF RECORD. -- Specific conductance: October 1964 to September 1970. Water temperatures: July 1963 to September 1970. Sediment records: July 1963 to September 1970.

#### EXTREMES \_\_1969\_70:

usmus, --1999-70: Specific conductance: Maximum daily, 820 micromhos June 24; minimum daily, 170 micromhos Sept. 10. Water temperatures: Maximum, 32.0°C June 18; minimum, freezing point on Jan. 3, 6. Sediment concentrations: Maximum daily, 28,200 mg/l July 25; minimum daily, 4 mg/l Jan. 25. Sediment discharge: Maximum daily, 110,000 tons Aug. 9; minimum daily, 0.04 ton June 24.

Period of record:
Specific conductance: Maximum daily, 1,550 micromhos Dec. 22, 1967; minimum daily, 140 micromhos Mar. 18, 1969.

Water temperatures: Maximum, 36.0°C July 12, 1968; minimum, freezing point on several days during 1964-68,

1970. Sediment concentrations: Maximum daily, 30,600 mg/l July 29, 1966; minimum daily, 1 mg/l May 27, 28, 31, June 1, 2, 1966.

Sediment discharge: Maximum daily, 410,000 tons Aug. 14, 1964; minimum daily, 0.01 ton July 3, 6, 7, 1969.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	DCT	NOA	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	360	370	400	375	370	370	360	330	310	320	350
2	350	370	370	400	375	420	370	360	330	340	260	340
3	350	360	390	400	375	420		360	330	330	275	360
4	350	370	400	400	375	390		360	330	330	275	380
5	350	360	370	400	410	390		360	330	330	260	320
,	350	300	370	700	410	370		360	,,,,	330	200	720
6	340	390	370	375	450	390			290	330	325	280
7	360	380	370	400	400	400		360	350	350	292	350
8	350	390	400	330	380	400		360	350	310	350	210
9	440	403	400	390	360	400		350	350	260	270	300
10	440	430	390	390	360	430		350	350	330	240	170
11	430	430	450	390	400	400	380	350	350	310	245	400
12	370	450	400	390	390	400	380	300	350	330	240	260
13	370	450	390	400	400	400	400	360	350	330	290	
14	370	450	390	390	400	400	380	360	350	330	350	
15	370	430	400	390	400	400	380	410	350	330	220	410
1,5	310	430	+00	390	+00	+00	300	410	350	330	220	410
16	÷00	410		390	400	400	400	370	350	330	290	300
17	400	400		400	390	400	400	370	350	360	230	300
18	440	410		410	400	400	400	370	350	330	230	
19	420	410		420	400	400	400	370	350	350	225	290
20	420	440		400	400	400	460	360	350	330	190	300
								2			280	300
21	400	410		410	400	400	460	360	350	260		
22	400	410		400	400	410	440	360	370	477	360	310
23	450	440		440	350	390	430	360	360	690	260	290
24	440	455	400	440	410	410	430	360	820	310	300	360
25	440	360	400	420	370	360	440	360	300	330	320	310
26	440	360	400	430	370	380	450	380	320	310	370	300
27	450	450	400	450	370	360	450	310	270	250	320	300
28	415	390	400	360	450	350	350	320	310		350	300
29	400	360	415	360	7.50	370	360	350	270	220	310	350
30	360	360	375	360		370	360	330	280	280	290	320
31	360		390	360		370		330		355	290	
31	300		370	300		310		,,,,				
AVG	394	402		396	391	392		355	349	334	284	313

### 09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ. -- Continued

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.0	5.0	4.0	2.0	1.0	9.0	9.0	21.0	14.0	21.0	21.5	18.5
2	21.0	8.0	7.0	1.0	10.0	10.0	14.0	9.0	17.0	25.0	20.0	22.0
3	25.0	7.0	10.0	0.0	1.0	5.0		12.0	14.0	20.0	23.0	29.0
4	16.0	10.0	10.0	3.0	4.0	10.0		9.0	14.0	24.5	24.0	22.0
5	14.0	7.0	7.0	3.0	15.0	15.0	~-	16.0	16.0	18.0	25.5	19.5
6	12.0	10.0	4.0	0.0	19.0	15.0	~-		19.0	24.0	22.0	20.5
7	17.0	10.0	5.0	1.0	5.0	5.0	~-	10.0	16.0	24.5	25.0	28.0
8	14.0	10.0	5.0	10.0	6.0	9.0		15.0	22.0	25.0	21.5	19.0
9	16.0	9.0	7.0	12.0	6.0	7.0	~-	10.0	16.0	27.0	23.0	19.5
10	24.0	11.0	9.0	2.0	8.0	17.0	~-	10.0	19.0	26.0	22.0	23.5
10	24.0	11.0	,,,	2.0	3.0	11.0		10.0	1940	20.0	22.0	23.9
11	22.0	12.0	8.0	4.0	10.0	6.0	16.0	11.0	20.0	18.5	23.5	19.0
12	9.0	12.0	16.0	6.0	8.0	8.0	10.0	23.0	22.5	22.5	23.0	21.5
13	12.0	10.0	4.0	10.0	7.0	5.0	25.0	12.0	14.0	22.0	25.5	
14	9.0	15.0	5.0	3.0	9.0	10.0	16.0	18.5	16.0	24.0	22.0	
15	12.0	8.0	13.0	13.0	5.0	7.0	17.0	21.0	16.5	21.0	25.0	14.5
16	25.0	12.0		3.0	7.0	12.0	26.0	30.0	20.0	23.0	21.0	16.5
17	24.0	10.0		7.0	5.0	6.0	27.0	29.0	14.0	22.0	22.5	22.0
18	12.0	7.0		3.0	10.0	13.0	15.0	21.0	32.0	26.0	21.0	
19	12.0	4.0	*	13.0	20.0	18.0	11.0	14.0	16.5	23.0	23.0	22.5
20	11.0	4.0		4.0	17.0	15.0	10.0	21.0	21.5	25.0	22.0	20.0
21	16.0	7.0		10.0	6.0	6.0	13.0	17.0	15.5	22.0	23.0	16.0
22	12.0			14.0	8.0	8.0	9.0	18.0	26.5	25.0	22.0	23.0
23	11.0	4.0	~-	12.0	6.0	7.0	11.0	15.0	18.5	31.0	24.0	12.0
24	8.0	13.0	16.0	5.0	12.5	12.0	9.0	21.0	24.5	28.5	20.0	21.0
25	10.0	5.0	6.0	5.0	6.0	8.0	10.0	15.0	28.5	28.0	23.0	12.0
26	8.0	9.0	7.0	6.0	9.0	15.5	10.0	20.0		22.0	19.5	14.5
27	15.0	5.0	5.0	9.0	9.0	8.0	18.0	15.0	20.0	21.5	22.5	11.0
28	19.5	7.0	7.0	6.0	16.0	8.0	10.0	16.5	24.0		19.0	14.0
29	15.0	7.0	5.5	3.0	10.0	7.0	14.0	22.0	18.5	20.0	19.0	12.0
30	6.0	8.0	5.0	1.0		11.0	22.0	22.0	22.5	25.0	19.0	25.0
31	8.0		5.0	3.0		9.0		15.5		28.0	22.0	
AVG	14.5	6.5	7.5	5.5	8.5	9.5	14.5	17.0	19.0	23.5	22.0	19.0

### SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARSÉ (TONS/DAY)
1	7.2	86	1.7	7.6	19	.39	12	27	.87
2	7.2	29	• 56	7.6	18	.37	12	15	.49
3	6.8	45	.83	7.6	18	.37	14	22	.83
4	6.5	22	.39	8.4	20	.45	14	30	1.1
5	6.2	46	.77	8.8	14	.33	14	19	.72
6	6.5	19	.33	9.2	13	.32	14	17	.64
7	6.5	34	.60	9.2	16	.40	13	45	1.6
8	5.9	47	. 75	9.6	28	.73	12	24	.78
9	5.6	14	.21	10	18	.49	12	23	.75
10	5.3	16	.23	9.6	7	.18	12	18	.58
11	4.8	7	.09	9.6	12	.31	12	25	.81
12	5.3	14	.20	9.6	22	.57	13	32	1.1
13	6.2	12	.20	9.6	10	.26	13	19	.67
14	6.8	17	. 31	9.6	10	.26	12	19	.62
15	6.8	15	-28	9.6	15	.39	12	31	1.0
16	6.5	14	.25	11	31	.92	12	30	.97
17	6.5	110	1.9	11	12	.36	11	30	.89
18	6.2	8	.13	11	26	.77	11	30	.89
19	6.2	10	.17	11	35	1.0	11	30	.89
20	6.2	10	.17	11	27	.80	11	25	.74
21	6.5	11	. 19	11	70	2.1	11	25	.74
22	6.5	8	.i4	11	20	.59	11	25	-74
23	6.8	7	.13	11	15	.45	11	25	.74
24	7.6	8	.16	12	58	1.9	11	24	.71
25	7.2	7	.14	13	14	.49	12	54	1.7
26	7.6	10	-21	13	23	.81	12	28	•91
27	8.0	9	.19	14	15	.57	12	34	141
28	8.0	10	.22	14	33	1.2	13	48	1.7
29	7.2	7	-14	13	9	.32	14	40	1.5
30	6.8	13	.24	13	22	.77	14	45	1.7
31	7.2	17	.33				14	26	. 98
FOTAL	204.6		1.2.16	315.6		18.87	382		29.46

### 09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ .-- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		3031 EN	DED-SEPIMENT D	ISCHARGE, WAI	ER TEAR UC	IUBEK 1909 IU 3	DEFIEMBER 1910	,	
		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	14	41	1.5	13	50	1.8	12	77	2.5
2	15	34	1.4	13	31	1.1	15	98	4-0
3	16	54	2.3	12	61	2.0	14	32	1.2
4	15	63	2.6	12	37	1.2	14	28	1.1
5	15	40	1.6	11	71	2.1	15	30	1.2
6	15	73	3.0	11	148	4.4	20	59	3.2
7	15	31	1.3	11	119	3.5	20	52	2.8
8	14	39	1.5	10	27	. 73	18	53	2.6
9	14	19	•72	10	43	1.2	15	40	1.6
10	14	84	3.2	11	37	1.1	15	40	1.6
11	14	21	.79	13	24	.84	15	64	2.6
12	15	20	.81	14	21	•79	15	67	2.7
13	15	66	2.7	14	40	1.5	14	30	1.1
14	14	37	1.4	13	25	.88	14	42	1.6
15	14	45	1.7	14	34	1.3	14	26	.98
16	15	58	2.3	14	67	2.5	13	51	1.8
17	15	58	2.3	14	38	1.4	13	37	1.3
18	14	26	.98	14	33	1.2	12	32	1.0
19	14	25	. 95	14	33	1.2	12	50	1.6
20	14	35	1.3	13	96	3.4	12	40	1.3
21	14	23	.87	14	49	1.9	12	23	.75
22	13	31	1.1	15	50	2.0	12	22	.71
23	13	30	1.1	15	42	1.7	12	18	.58
24	12	18	.58	15	53	2.1	11	26	• 77
25	13	4	.14	14	42	1.6	12	41	1.3
26	14	20	.76	14	25	.95	12	36	1.2
27	13	26	.91	14	46	1.7	11	29	.86
28	13	53	1.9	12	80	2.6	ii	39	1.2
29	12	70	2.3				ii	74	2.2
30	14	21	• 79				11	48	1.4
31	13	54	1.9				ii	57	1.7
TOTAL	435		46.70	364		48.69	418		50.45

		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CDNCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	11	40	1.2	8.8	40	. 95	5.9	19	. 30
2	12	29	.94	8.8	29	.69	8.0	15	• 32
3	11	20	.59	9.6	33	.86	8.D	18	.39
4	11	20	.59	10	27	.73	7.6	15	.31
5	11	20	- 59	10	39	1.1	7.2	15	-29
6	12	20	.65	9.2	35	.87	8.0	29	.63
7	11	20	•59	8.8	26	- 62	7.6	18	.37
8	11	20	.59	8.8	48	1.1	6.8	22	• 40
9	10	20	. 54	8.8	19	.45	5 • 6	18	<b>-27</b>
10	9.6	20	•52	8.8	45	1.1	4.3	23	.27
11	9.2	19	.47	8.4	26	•59	5.D	16	•22
12	8.8	36	.86	8.0	81	1.7	4.3	18	.21
13	9.2	40	• 99	7.6	30	.62	3.9	11	•12
14	8.4	8	.18	7.6	36	.74	3.6	14	.14
15	9.2	66	1.6	7.6	16	.33	3.9	12	.13
16	9.6	19	.49	7.6	24	.49	3.9	18	-19
17	11	18	•53	7.2	26	-51	3.6	9	• D9
18	12	45	1.5	7.2	27	•52	3.4	23	.21
19	12	42	1.4	6.5	31	• 54	3.4	14	-13
20	11	29	.86	6.2	13	.22	2.9	9	.D7
21	11	30	. 89	5.6	9	.14	2.3	8	•D5
22	9.6	16	•41	5.6	11	-17	2.8	8	•06
23	10	16	.43	5.6	8	•12	2.9	7	• 05
24	11	17	.50	6.2	6	.10	2.9	5	.04
25	11	25	• 74	5.9	9	-14	2.6	8	.06
26	10	18	.49	6.5	8	-14	2.6	13	.09
27	9.2	18	. 45	7.2	21	.41	2.5	9	.06
28	8.0	27	.58	7.6	26	•53	77	388	226
29	7.6	45	.92	8.0	32	-69	39	868	172
30	8.4	56	1.3	6.5	17	.30	10	1100	30
31				5.9	36	.57			

#### 09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	JULY				AUGUST			SEPTEMBER	
DAY	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEY- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	8.0	185	4.0	219	7480	11700	19	70	3.6
ž	7.0	115	2.2	118	14000	4460	18	60	2.9
2	6.5	57	1.0	1480	21700	100000	18	200	9.7
4	6.0	112	1.8	272	10200	8460	32	550	48
5	4.8	36	.47	91	5680	1370	53	2 <b>05</b> 0	293
6	3.4	51	•47	43	1850	215	34	2750	252
7	3.2	37	. 32	150	4990	6000	27	500	36
8	3.6	35	. 34	32	1500	130	48	1180	440
9	4.3	14	.16	1780	15100	110000	24	193	13
10	4.8	16	.21	500	10800	15900	166	5550	3430
11	3.9	51	. 54	575	16500	28000	33	690	61
12	6.8	16	.29	167	4990	2250	32	1450	125
13	8.9	18	.43	69	1500	279	25	650	44
14	3.9	24	.25	94	4200	2600	23	41D	25
15	3.7	32	. 32	160	8170	4880	22	410	24
16	3.4	75	.69	344	9840	14500	20	163	8.8
17	3.4	44	.40	634	16400	31300	18	90	4.4
18	2.8	18	.14	387	13900	17100	16	85	3.7
19	2.9	521	23	259	7850	5990	15	80	3.2
20	13	2280	168	134	3990	1440	14	71	2.7
21	192	10500	15500	66	1350	241	13	46	1.6
22	67	17000	4160	67	2880	830	12	22	-71
23	29	5000	392	83	4950	1180	11	32	.95
24	45	11800	1690	48	1250	162	9.6	106	2.7
25	468	28200	43000	40	1200	130	8.4	48	1.1
26	48	7100	920	36	510	50	7.2	24	•47
27	36	5430	748	32	235	20	7.6	29	-60
28	171	7750	7450	27	134	9.8	8.8	18	.43
29	376	14700	20700	26	83	5.8	9.2	28	.70 .78
30	37	4300	430	25	102	6.9	9.6	30	./8
31	27	1400	102	22	49	2.9			
TOTAL	1600.3		99297.03	7980		369212.4	753.4		4840.04
	DISCHARGE FO								13246.3
TOTAL	SUSPENDED-SE	EDIMENT DIS	SCHARGE FOR YE	AR (TONS)					470029.70

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM MITHDRAMAL TUBE; C, CHEMICALLY DISPERSED; N, IM NATIVE WATER; P, PIPET; S, SIEVE; V. VISUAL ACCUMULATION TUBE; M, IN DISTILLED WATER)

	WATER TEM-								PAR	TICLE	SIZE					METHOR
	PERA-	DISCHARGE	CONCEN-	SEDIMENT Discharge	PERCE	ENT F	INER	THAN .	THE S	IZE (	IN MI	LIME1	TERS)	INDI	CATED	METHOD OF Analy-
DATE	TIME (°C)	(CFS)	(MG/L)	(TONS/DAY)	•002	•004	.008	.016	.031	.062	•125	.250	• 500	1.00	2.00	SIS
AUG 3 1970	0940 21.5	2800	24000	181000	43	48		69		89	96	99	100			VPMC

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, MATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHOD OF ANALYSIS: H, HYDROMETER; O, OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

		WATER TEM-	NUMBER OF						PART	ICLE S	IZE					MET 40D
		PERA-	SAM- PLING	DISCHARGE		PERCEN	T FINE	R THAN	THE S	IZE (I	N MILL	IMETER	RS) IND	ICATED	)	ANALY-
DATE	TIME		POINTS	(CFS)		•125	.250	•500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	SIC
AUG 19 1970	1020				1	3	25	63	75	83	91	97	100			s

#### 09471800 SAN PEDRO RIVER NEAR BENSON, ARIZ.

LOCATION.--Lat 32°07'35", long 110°17'22", in SW2 sec.15, T.15 S., R.20 E., Cochise County, at gaging station 6 miles downstream from Tres Alamos Wash and 11 miles north of Benson.

DRAINAGE AREA. -- 2,500 sq mi, of which 696 sq mi is in Mexico.

PERIOD OF RECORD. -- Sediment records: March 1966 to September 1970.

EXTREMES, -- 1969-70:

Sediment concentrations: Maximum daily, 66,700 mg/l July 25; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 545,000 tons July 20; minimum daily, 0 ton on many days.

ADDT

Period of record (1968-70):
Sediment concentrations: Maximum daily, 78,600 mg/l July 28, 1969; minimum daily, no flow on many days
each year.
Sediment discharge: Maximum daily, 545,000 tons July 20, 1970; minimum daily, 0 ton on many days each year.

REMARKS.--No flow Oct. 1 to June 27, Sept. 1-2, 19-30. Tabular data omitted for period Oct. 1 to Mar. 31. R of temperature and specific conductance of individual samples available in district office, Tucson, Ariz.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

ILIME

		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	٥	0	0	0	D	D
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27							D	0	. 0
28							35	9880	8960
29							38	49500	5930
30	0	0	0		*-		9.0	20400	496
31				0	0	0			
TUTAL	0		0	0		0	82.0		15386

#### 09471800 SAN PEDRO RIVER NEAR BENSON, ARIZ .-- Continued

257

15165.00 2376311.30

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CDMCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	3.0	10000	81	567	39100	143000	0	0	0
2	1.5	5000	20	817	44400	149000	9	3	0
3	9.0	20400	496	1240	37500	162000	4.5	2530	620
4	8.0	15000	324	1115	35900	110000	65	25900	5110
5	4.0	1000	11	148	21400	8550	46	21000	2670
6	2.0	800	4.3	208	28200	20300	8.0	16800	363
7	.80	681	1.5	5.0	10000	135	1.0	1000	2.7
8	.50	350	.47	284	21800	22600	1.0	1000	2.7
9	.10	100	•03	843	19200	119000	5.2	30600	430
10				994	41500	123000	50	22200	3620
11				508	34900	54200	67	16300	2950
12				311	28100	23600	18	19200	2130
13				90	13500	3280	4.0	10000	108
14				63	13800	3190	2.0	5000	27
15				132	28800	11500	1.0	2000	5.4
16				698	33400	107000	.50	1000	1.4
17				1540	46300	231000	.20	500	.27
18	0	0	0	577	30100	53300	.10	200	•05
19	35	208	939	200	16600	8960	0	0	0
20	1690	63600	545000	300	24000	19400			
21	649	65100	194000	100	11200	3020			
22	59	57200	12400	50	10000	1350			
23	79	56500	14100	250	38000	25700			
24	36	37100	7880	98	21400	5660			
25	167	66700	35100	25	7000	473			
26	111	46900	14100	13	6000	211			
27	62	34200	5730	3.1	2000	17			
28	228	41000	44600	2.0	1500	8.1			
29	377	47200	49300	1.0	1000	2.7			
30	79	31600	6740	•50	500	•68	0	0	0
31	31	31100	2600	0	0	0			
TOTAL	3631.90		933427.30	11177.60		1409457.48	273.50		18040.52

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B. BOTTOM WITHDRAWAL TUBE; C. CHEMICALLY DISPERSED; N, IN NATIVE WATER; P. PIPET; S., SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)

			WATER								PARTI	CLF S	311				
	DATE			DISCHARGE (CFS)	TRATION	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)					THE SI						ANALY-
JUL	28, 1970 29	1230		1430 567 3060	109000 52200 60510	421000 79900 500000	32 41 30	42 51 41	2	56 72	==	91 93 82	98 99 94	100 100 99	100	 	VPWC

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHOD OF ANALYSIS: H, HYDROMETER; O. OPTICAL ANALYZER; S, SIEVE; V, VISUAL ACCUMULATION TUBE)

	WATER TEM-	NUMBFR ∩F						PAR	LICTE 2	IZE					
		SAM-	DISCHARGE		PERCENT	FINE	R THAN	THE S	SIZE (I	N MILL	IMETER	S) IND	ICATED		METHOD OF
DATE	TIME (°C)				.125	.250	-500	1.00	2.00	4.00	8.00	16.0	32.0	64.0	ANALY- SIS
29, 1969 19, 1970	1600 1200			2	8 12	31 35	68 59	84 70	92 75	98 79	99 83	100 100			S

#### 09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ.

LOCATION.--Lat 32°58'38", long 110°46'11", in SEASWA sec.24, T.5 S., R.15 E., Pinal County, at gaging station 0.7 mile south of Winkelman and 1.0 mile upstream from mouth.

DRAINAGE AREA. -- 4,471 sq mi, of which 696 sq mi is in Mexico

PERIOD OF RECORD, --Chemical analyses: January 1967 (miscellaneous). Specific conductance: January 1966 to September 1970. Water temperatures: January 1966 to September 1970. Sediment records: January 1966 to September 1970.

EXTREMES. -- 1969-70:

NEMEN. --1969-70: Specific conductance: Maximum daily, 1,700 micromhos Jan, 8; minimum daily, 380 micromhos Nov. 17. Water temperatures: Maximum, 40.9°C July 5, 11, Aug, 28; minimum, 8,0°C Dec. 6. Sediment concentrations: Maximum daily, 123,000 mg/l Aug. 28; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 255,000 tons July 21; minimum daily, 0 ton on many days.

Period of record: Specific conductance: Maximum daily, 2,050 micromhos Sept. 15, 1989, minimum daily, 320 micromhos Feb. 14, 1988.

Maximum, 42.0°C Sept. 10, 1968; minimum, 2.0°C Dec. 31, 1966. Sediment concentrations: Maximum daily, 123,000 mg/l Aug. 2, 1970; minimum daily, no flow on many days. Sediment discharge: Maximum daily, 91,000 tons Dec. 20, 1967; minimum daily, 0 ton on many days.

REMARKS. -- No flow Oct. 1, 11, 17-20, Nov. 23-27, May 16-31, June 1-29, July 13-19, Sept. 21, 30.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					(ONCE-D	AILY MEASI	JREMENT)					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		1190	1150	1170	1200	1100	990	1100		1020	800	850
2	960	1190	1150	1170	1000	750	1000	1100		1000	645	860
3	1100	1190	1150	1170	1950	391	1000	1100		1100	495	780
4	1200	1145	1100	1170	1075	745	1000	1100		1000	470	770
5	1120	1100	1100	1000	1100	910	1000	1100		1050	485	780
6	1120	1100	1050	1200	1050	1000	1050	1150		1100	550	400
7	1120	1100	1100	1200	1200	1000	1000	1200		1100	525	500
8	1126	1100	1100	1700	1200	1000	1000	1200		1000	675	760
9	1110	1000	1100	1050	1100	1100	1000	1200		990	512	800
10		1000	1050	1100	1100	1020	1000	1200		990	483	860
41		860	1100	1190	1150	1000	1000	1200		1000	533	860
12		935	1100	1150	1100	1000	1000	1200			445	700
13		1100	1100	1150	1100	1050	1050	1200			425	650
14		1100	1100	1150	1100	1050	1050	1250			550	840
15		1100	1100	1150	1100	1050	1050	1250			488	840
16		1300	1150	1150	1100	1050	1050				55D	900
17		380	1100	1150	1100	1050	1050				520	890
18		855	1100	1200	1100	1100	1050				462	1100
19		1200	1200	1150	1100	1100	1050				400	1050
20		1200	1150	1150	1100	1100	1050			738	512	1100
21	1130	1200	1150	1150	1100	1100	1050			625	475	
22	1100	1200	1150	1150	1100	1100	1100			600	700	910
23	1080		1150	1150	1100	1100	1150			700	800	910
24	1080		1150	1150	1100	1100	1150			700	468	910
25	1100		1150	1150	1100	1100	1150			600	800	910
23	1100		1150	1150	1100	1100						_
26	1090		1150	1150	1100	1100	1150			560	850	1110
27	1110		1150	1200	1100	1200	1150			610	950	980
28	1100	1200	1150	1200	1100	1150	1150			750	1010	980
29	1100	1200	1100	1200		1200	1150			900	1000	980
30	1150	1100	1170	1200		1200	1120			620	850	
31	1150		1170	1200		990				550	850	
AVG		1080	1130	1170	1100	1030	1060				621	856

# 09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ. -- Continued

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OC T	NOA	DEC	JAN	FEB	MAR	APR	YAM	JUN	JUL	AUG	SEP
1		15.0	20.0	20.0	20.0	26.0	28.0	30.0		34.0 25.0	31.0	35.0
2	15.0	13.0	20.0	18.0	19.0	17.0	30.0	31.0			35.0	31.0
3	15.0	13.0	21.0	17.0	16.0	13.0	19.0	33.0		38.0	31.0	32.0
4	16.0	19.5	16.0	18.0	17.0	16.5	30.0	32.0		37.0	30.0	25.5
5	10.0	26.0	18.0	17.0	21.0	15.0	30.0	34.0		40.0	33.0	26.0
6	9.0	22.0	8.0	19.0	26.0	24.0	19.5	34.0		35.0	30.0	22.5
7	12.0	13.0	18.0	17.0	22.0	16.0	23.0	20.0		30.0	34.5	27.0
8	17.0	20.0	19.0	18.0	24.0	27.0	31.0	33.0		30.0	34.0	34.0
9	13.0	18.0	17.0	13.0	21.0		28.0	31.0		38.0	30.0	25.0
10		17.0	21.0	18.0	21.0	20.0	33.0	37.0		32.0	31.5	36.0
11		18.5	21.0	19.0	27.0	18.0	30.0			40.0	30.5	32.0
12		17.0	21.0	20.0	27.0	17.C	32.0	38.0			33.0	32.0
13		15.0	10.0	23.0	28.0	28.0	29.0	36.0			33.0	29.0
14		25.0	25.0	25.0	24.0	28.0	29.0	34.0			32.0	30.0
15		23.0	22.0	19.0	27.0	20.0	31.0	34.0			32.5	32.0
16		20.0		21.0	26.0	29.0	28.0				28.0	20.0
17		17.0	27.0	20.0	26.0	20.0	23.0			~-	29.0	31.0
18		13.0	18.0	22.0	20.0	21.0	20.0				29.5	30.0
19		18.0	23.0	18.0	25.0	22.0	32.0				30.5	35.0
20		18.0	25.0	18.0	21.0	28.0	25.0			30.5	32.5	35.0
21	16.0	20.0	26.0	25.0	19.0	27.0	29.0			33.0	30.0	
22	14.0	21.0	22.0	22.0	25.0	28.0	30.0			28.0		26.0
23	25.0		18.0	23.0	26.0	27.0	31.0			34.0	30.0	27.0
24	29.0		23.0	23.0	22.0	27.0	32.0			30.0	33.5	20.0
25	23.0		17.0	24.0	28.0	20.0	34.0			32.0	31.0	19.0
26	22.0		20.0	24.0	21.0	27.0	31.0			34.5	33.0	28.0
27	26.0		23.0	25.0	25.0	20.0	32.0			32.0	25.0	26.0
28	28.0	25.0	14.0	24.0	26.0	19.0	25.0			31.0	40.0	24.0
29	25.0	19.0	13.0	17.0		20.0	22.0			34.0	37.0	31.0
36	25.0	21.0	19.0	19.0		24.0	26.0		34.5	33.5	35.0	
31	23.0		18.0	21.0		19.0				32.0		
AVG		19.0	19.5	20.0	23.0	22.0	28.0			33.0	32.0	28.5

### SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN OISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	.70	62	.12	-50	4	.01
2	.10	20	.01	.70	58	•11	-50	5	-01
3	.10	21	.01	.70	62	.12	•50	67	•09
4	.10	74	-05	1.0	75	.20	.70	39	•07
5	.30	26	.04	1.3	72	.25	• 70	73	.14
6	. 30	31	.05	1.3	140	.49	.70	46	•09
7	.20	36	.03	1.3	123	.43	•70	141	•27
8	.10	17	.01	1.6	171	.74	1.0	43	•12
9	.10	21	.01	4.5	700	8.5	1.6	65	•28
10	.10	14	•01	5.3	750	11	3.1	90	.75
11	0	0	0	92	38200	14400	5.3	95	1.4
12	.10	13	-01	21	12000	680	4.5	79	• 96
13	.10	19	.01	8.4	850	19	5.3	66	.94
14	.10	17	-01	8.4	550	12	6.2	53	.89
15	.10	14	•01	8.4	500	11	5.3	44	.63
16	.10	13	.01	86	7337	3120	4.5	34	.41
17	0	0	0	482	12700	20100	5.3	38	.54
18				25	450	30	3.8	35	.36
19				1.0	39	-11	2.6	29	.20
20	0	0	0	.70	31	•06	3.1	32	.27
21	.70	116	•31	•50	22	.03	3.1	36	.30
22	19	7000	359	.20	24	.01	2.6	34	.24
23	5.3	1800	26	0	0	0	3.1	33	.28
24	1.6	389	1.7				2.6	28	•20
25	1.0	236	-64				2.6	33	.23
26	-50	200	.27	<del></del>			2.6	32	.22
27	•50	170	.23	¢	.0	0	4.5	26	. 32
28	.70	143	.27	-10	10	0	4.5	40	.49
29	.70	84	-16	.50	11	.01	9.6	79	2.0
30 31	.40	56 63	.06 .09	.40	15	•û2	8.4 7.2	43 50	. 98
31	.90	63	.09				1.2	<b>3</b> 0	•97
TOTA	32.80		399.00	753.00		38394.20	106.70		14.66

#### 09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEY- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1 2 3 4 5	7.2 6.2 6.2 5.3 4.5	24 8 38 34 42	.40 .13 .64 .49	6.2 5.3 5.4 4.4	24 46 36 48 66	.40 .66 .52 .70 .78	3.4 402 2080 90 34	30 4910 13500 2100 275	16600 115000 510 25
6 7 8 9	4.5 6.2 7.2 8.4 8.4	41 40 50 70 70	.50 .67 .97 1.6 1.6	4.4 4.4 4.4 4.4	43 43 48 39 36	.51 .51 .57 .46 .43	34 34 32 28 25	180 160 86 42 44	17 15 7.4 3.2 3.0
11 12 13 14	8.4 7.2 6.2 6.2 7.2	45 52 48 44 43	1.0 1.0 .80 .74	4.9 4.9 4.9 5.5 4.9	26 36 32 72 73	.34 .48 .42 1.1	25 22 18 11 10	62 75 28 52 22	4.? 4.5 1.4 1.5
16 17 18 19 20	6.2 7.2 8.4 8.4 7.2	34 45 32 42 32	.57 .87 .73 .95 .62	4.9 4.9 4.9 4.9	28 28 32 19 33	.37 .37 .42 .25	7.5 8.2 6.8 6.8 7.5	21 22 19 19 18	.43 ,49 .35 .35
21 22 23 24 25	7.2 6.2 6.2 7.2 7.2	29 28 37 28 28	• 56 • 47 • 62 • 54 • 54	4.4 3.9 3.9 3.9	19 77 48 30 29	.23 .81 .51 .32	7.5 6.8 6.8 6.1 6.8	13 65 24 8 10	.26 1.2 .44 .13
26 27 28 29 30	7.2 5.3 4.5 5.3 5.3	28 27 16 14	.54 .39 .19 .20	3.4 3.4 3.0	27 20 35	.25 .18 .28	6.8 6.8 6.8 6.8	8 55 78 28 56 67	.15 1.0 1.4 .51
31 TOTAL	6.? 204.5	16	.27 20.12	127.5		13.15	6.8 2960.0		1.2
		APRIL			MAY			JUNE	
DAY	MFAN DISCHARGE (CFS)	APRIL MEAN CONCENTRATION (MG/L)	SEOIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MAY MEAN CONCENT TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	JUNE MEAN CONCEN- TRATION (MG/L)	SFDIMENT DISCHARGE (TDNS/DAY)
DAY 1 2 3 4 5	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE	DISCHARGE	MEAN CONCEN- TRATION	DISCHARGE
1 2 3 4	DISCHARGE (CFS) 6.1 5.5 5.5 4.9	MEAN CONCEN- TRATION (MG/L) 31 56 102 32	DISCHARGE (TDNS/DAY) -51 .83 1.5 .42	DISCHARGE (CFS) 3.9 3.0 2.6 2.6	MEAN CONCEN- TRATION (MG/L) 67 44 43 79	DISCHARGE (TONS/DAY) .71 .36 .30 .55	DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) D	DISCHARGE (TDNS/DAY)
1 2 3 4 5 6 7 8 9	0.1 5.5 5.5 4.9 4.4 4.4 3.9 3.9	MEAN CONCEN- TRATION (MG/L) 31 56 102 32 54 24 29 17 24	DISCHARGE (TDNS/DAY)  .51 .83 1.5 .42 .64 .29 .31 .18	DISCHARGE (CFS)  3.9 3.0 2.6 2.6 1.9 2.2 1.9 1.3 1.1	MEAN CONCEN- TRATION (MG/L) 67 44 43 79 48 53 97 49	DISCHARGE (TDNS/DAY)  .71 .36 .30 .55 .25 .31 .50 .17	0	MEAN CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
1 2 3 4 5 6 7 8 9 10 11 12 13	DISCHARGE (CFS) 6.1 5.5 5.5 4.9 4.4 4.4 3.9 3.9 4.4 4.4 3.6 I.9	MEAN CONCEN- TRATION (MG/L) 31 56 102 32 54 29 17 24 19 18 10 14 11	DISCHARGE (TONS/DAY)  -51 -83 1-5 -42 -64 -29 -31 -18 -25 -23 -21 -12 -13 -06	DISCHARGE (CFS) 3.9 3.0 2.6 2.6 1.9 2.2 1.9 1.3 1.1 .70 .90 .90	MEAN CONCEN- TRATION (MG/L)  67 44 43 79 48 53 97 49 38 24 50 35 16	OTSCHARGE (TONS/DAY)  -71 -36 -30 -55 -25 -31 -50 -17 -11 -05 -12 -09 -04 -15	0 (CFS)  0	MEAN CONCENTRATION (MG/L)  D	OISCHARGE (TONS/DAY)  O
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DISCHARGE (CFS) 6.1 5.5 5.5 4.9 4.4 4.4 3.9 3.9 4.4 4.4 3.6 1.9 1.6	MEAN_CONCEPT   10   10   10   10   10   10   10   1	DISCHARGE (TONS/DAY) -51 -83 -1-9 -42 -64 -29 -31 -18 -25 -23 -21 -12 -13 -06 -05 -04 -11 -02 -05	DISCHARGE (CFS)  3.9 3.0 2.6 2.6 1.9 2.2 1.3 1.1 .70 .90 .90 .90 .30	MEAN CONCENTRATION (MG/L) (MG/L) (44 43 79 48 53 97 49 38 24 50 62 89 C	01 SCHARGE (TONS/DAY) -71 -36 -30 -55 -25 -31 -50 -17 -11 -05 -12 -09 -04 -15 -07	0	MEAN CONCENTRATION (MG/L)	OISCHARGE (TONS/DAY)  O
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 5 16 17 18 19 20 21 22 23 4	DISCHARGE (CFS) 6.1 5.5 5.5 4.9 4.4 4.4 3.9 3.9 4.4 4.4 3.1 1.9 1.6 1.3 1.1 1.1 1.1 1.1 1.90 .90	MEAN_CONCEPT. TARATION (MG/L)  36 102 32 54 29 17 24 19 18 10 14 11 12 10 37 7 7 22 5 36 5 8 7	DISCHARGE (TDNS/DAY)  -51 -83 -1-5 -83 -1-5 -42 -64 -29 -31 -18 -25 -23 -21 -12 -13 -06 -05 -01 -02 -03 -03 -02 -03 -02 -03 -03 -02	DISCHARGE (CFS) 3.9 3.0 2.6 2.6 1.9 2.2 1.9 1.3 1.1 .70 .90 .90 .30	MEAN CONCENTRATION (MG/L) (MG/L) (44 43 79 48 53 97 49 38 24 50 66 62 89 67 67 68 68 68 68 68 68 68 68 68 68 68 68 68	01 SCHARGE (TONS/DAY) -71 -36 -30 -55 -25 -25 -25 -27 -17 -11 -05 -12 -09 -04 -15 -07	0	MEAN CONCENTRATION (MG/L)	OISCHARGE (TONS/DAY)  O

#### 09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ. -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	8.2	51600	1140	6.1	42300	697	1.0	220	.59
ž	7.5	30200	612	447	123000	165000	1.0	150	•41
ā	6.8	8500	156	188	80500	45000	48	238D0	10600
3	6.1	900	15	952	75700	206000	13	59200	2270
Ś	6. i	194	3.2	87	61500	14600	17	30600	1400
6	5.5	14000	209	22	52500	3120	320	48600	49300
7	4.4	3000	36	43	65900	8120	48	36700	4760
8	3.6	1960	17	11	60000	1780	10	3920	106
9	6.1	21900	361	45	77600	10900	4.0	375	4.1
10	5.5	2300	34	804	73800	207	1.0	320	.86
11	3.4	187	1.7	362	72900	75300	.20	250	.14
12	1.0	50	.14	346	61600	63800	21	51100	4410
13	0	0	0	144	63000	24700	30	44900	3640
14				107	54100	17900	14	36700	1390
15				245	5090 <b>0</b>	49500	6.8	9500	174
16				529	58700	123000	6,1	1980	33
17				696	68000	162000	5.5	1080	16
18				596	68600	110000	3.0	650	5.3
19	0	0	0	399	56700	61100	1.9	475	2.4_
20	343	33500	103000	132	48900	17400	.50	177	. 35
21	973	79700	255000	118	44900	14300	0	0	0
22	120	71800	23300	13	26000	913	.80	96	.21
23	20	52000	2810	25	20900	1410	.60	110	.18
24	13	45900	1610	168	48900	55500	.40	72	•09
25	34	68600	6300	30	33700	2730	.20	60	.06
26	132	116000	47900	10	23500	635	.20	27	-02
27	53	94300	13500	10	10500	284	.20	29	.03
28	30	54600	4420	8.0	4000	86	.20	19	• 02
29	68	47600	13800	6.0	800	13	.20	12	.01
30	195	101000	55200	4.0	440	4.8	0	0	0
31	23	60300	3740	2.0	260	1.4			
TOTAL	2068.2		533165.04	6555.1		1202701.2	554.80		78113.87
	DISCHARGE FO SUSPENDED-S		FS-DAYS) Scharge for Ye	AR (TONS)					13477.40 1985052.99

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

		WATER TEM-								PAR	TICLE	SIZE					METHOD
		PERA-	DISCHARGE	CONCEN-	SEDIMENT DISCHARGE	PERC	ENT F	INER	THAN	THE S	IZE (	IN MI	LIME1	rers)	INDI	CATED	OF ANALY-
DATE	TIME	(°C)	(CFS)	(MG/L)	(TONS/DAY)	.002	•004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	SIS
NOV 11 1969			121	59300	19400	55	69		95		100	)					VPWC
JUL 1 1970	1130	33.0	8.2	47200	1050	74	90		100								SPWC
JUL 26			160	182000	78600	45	62		90		98	98	99	100			VPWC
AUG 2			1530	127000	525000	40	56		80		98	99	100				VPWC
AUG 10	1115	30.0	1740	111000	521000	38	50		72		94	07	99	100			VPWC

# 09474000 GILA RIVER AT KELVIN, ARIZ. (Irrigation network station)

LOCATION. -- Lat 33°06'11", long 110°58'26", in NE NW sec. 12, T.4 S., R.13 E., Pinal County, at Florence-Kelvin road bridge at Kelvin, 200 ft upstream from Whineral Creek, 700 ft upstream from gaging station, 18 miles downstream from San Pedro River, 19 miles upstream from Ashurst-Hayden Dam, and 49 miles downstream from Coolidge Dam.

DRAINAGE AREA.--18,011 sq mi at gaging station, of which 5,125 sq mi is downstream from Coolidge Dam.

PERIOD OF RECORD. -- Chemical analyses: December 1950 to September 1970.

Sediment records: January 1958 to September 1970.

EXTREMES.--1960-70:
Dissolved solids: Maximum 1.520 mg/l Jan 1.31 minimum 472 mg/l Man 3-4

REMES. --1969-70:
Dissolved Solids: Maximum, 1,520 mg/l Jan. 1-31; minimum, 473 mg/l Mar. 3-4.
Hardness: Maximum, 640 mg/l Jan. 1-31; minimum, 210 mg/l Mar. 3-4.
Hardness: Maximum, 640 mg/l Jan. 1-31; minimum, 210 mg/l Mar. 3-4.
Specific conductance: Maximum daily, 2,290 micrombos Jan. 19, 29, 30; minimum daily, 530 micrombos Nov. 17.
Water temperatures: Minimum, 7.0°C Feb. 1.
Sediment concentrations: Maximum daily, 54,800 mg/l Aug. 4; minimum daily, 8 mg/l Jan. 28, 30.

#### CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

			DIS-	DIS- SOLVED		DIS- SOLVED	DIS- SOLVED				DIS-
	MEAN	DIS- SOLVED	SOLVED CAL-	MAG- NE-	DIS-	SODIUM Plus	PO- TAS-	BICAR-	CAR-	DIS- SOLVED	SOLVED CHLO-
	DIS-	SILICA	CIUM	SIUM	SODIUM	POTAS-	SIUM	BONATE	BONATE	SULFATE	RIDE
DATE	(CFS)	(SIO2) (MG/L)	(CA) (MG/L)	(MG) (MG/L)	(NA) (MG/L)	SIUM	(K) (MG/L)	(HCO3) (MG/L)	(CO3) (MG/L)	(SD4) (MG/L)	(CL) (MG/L)
DHIL	(CFS)	(HO/L)	(HG/L)	(HU/L)	(NG/L)	(MG/L)	(HO/L)	(NO/L)	(NO/L)	(NO/L)	(HO/L)
DCT.											
01-12A	179	33	92	22	184		7.8	223	0	168	250
13-23	154		90	26	192			205	0		
24-31	146		100	26	202			200	0		
NOV.											
01-16	112		118	28	196			186	0		
17-18	365		76	12	56			176	0		
19-30 DEC.	60		178	31	202			244	0		
01-08	77		135	28	201			228	0		
09-20	145		112	24	201			213	Ö		
21-31	232		98	25	209			216	ő		
JAN.					20,				•		
01-31	48		190	40	225			218	0		
FEB.											
01-28	346		92	28	222			208	0		
MAR.											
01-02	597	26	90	28	217			198	0	236	314
03-04	2530	23			67			130	0	•-	
05-08	356	28	84	53	153			235	0	293	200
09-31	468	27	92	32	222			237	0	220	332
APR. 01-30B	495	25	92	32	240		• •	217	3	210	356
MAY	473	23	72	32	240		9.0	217	•	210	336
01-31	455	34	94	33		268		221	0	216	388
JUNE	455	34	, 4	33		200		221	v	210	300
01-30	440	25	88	34		276		204	0	201	412
JULY											
01-19C	575	25	91	33	282		10	206	0	209	408
20-21	1040	25	113	27		169		392	0	117	224
22-31	557	26	96	30		260		216	0	204	382
AUG.											_
01-03	689	25	148	38		254		220	0	380	354
04-05 06-09	902	22 23	90 105	16		139		200	0	160	186
10-16	398 598	23	112	23 20		266		196 211	0	220 210	382 294
17-21	724	22	95	16		205 169		211	0	176	220
22	300	25	108	24		285		204	ŏ	236	408
23	350	20	88	18		158		224	ŏ	154	206
24	400	22	98	21		224		220	ŏ	196	306
25-31	325	24	92	32		292		190	ò	234	422
SEP.											
01-05	376	23	95	28		291		195	0	218	422
06-07	1280	22	108	22		150		188	0	250	192
08-30	215	23	102	27		267		194	0	246	376
								215			
WTD. AVG.			97	30				212	0		
TIME WID.	355		108	30				213	0		
TOT. LOAD			100	30				213	v		
(TONS)			32700	10000				74100	120		

A INCLUDES 0.6 MG/L OF DISSOLVED FLUGRIDE (F).
B INCLUDES 1.1 MG/L OF DISSOLVED FLUGRIDE (F).
C INCLUDES 1.2 MG/L OF DISSOLVED FLUGRIDE (F).

#### 09474000 GILA RIVER AT KELVIN, ARIZ .-- Continued

EXTREMES. --1969-70:--Continued
Sediment discharge: Maximum daily, 187,000 tons July 21; minimum daily, 0.91 ton Jan. 28.
Period of record:
Dissolved solids: Maximum, 4,330 mg/l Jan. 3, 1966; minimum, 224 mg/l Sept. 24, 1954, Feb. 12, 1963.
Hardness: Maximum, 2,610 mg/l Jan. 3, 1966; minimum, 125 mg/l Sept. 1-30, 1957.
Specific conductance: Maximum daily, 5,120 micromhos May 22, 1961; minimum daily, 407 micromhos Jan. 20, 1952.
Water temperatures: Maximum daily, 153,000 mg/l July 25, May. 20, 1953; minimum, 3,5°C Jan. 13, 1962.
Sediment concentrations: Maximum daily, 133,000 mg/l July 30, 1961; minimum daily, 1 mg/l May 8, 1961.
Sediment discharge: Maximum daily, 740,000 tons Dec. 23, 1965; minimum daily, 0.01 ton on several days during
June and July 1961.
REMARKS. --No appreciable inflow from Mineral Creek between sampling point and gaging station except during periods
of heavy local rains. Sediment-discharge figures include sediment discharge from Mineral Creek.

#### CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS_ SOLVED NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SOBIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
ост.											
01-12	2.0	1000	926	870	1.26	448	320	138	4.5	1460	8.2
13-23			984		1.34	409	332	164	4.6	1550	8.1
24-31			1050		1.43	414	358	194	4.6	1630	8.1
NOV.											
01-16			1080		1.47	327	410	258	4.2	1700	7.7
17-18			503		.68	496	238	94	1.6	735	7.6
19-30			1320		1.80	214	570	370	3.7	1950	8.0
DEC.											
01-08			1160		1.58	241	450	263	4.1	1770	8.1
09-20			1040		1.41	407	380	206	4.6	1680	8.2
21-31			1030		1.40	645	345	168	4.9	1670	8.2
JAN.											
01-31			1520		2.07	197	640	462	3.9	2130	8.1
FEB.											
01-28			1030		1.40	962	345	174	5.2	1720	8.1
MAR.											
01-02	2.2	220	988	1010	1.34	1590	340	178	5.1	1630	7.5
03-04		180	473		.64	3230	210	98	2.1	732	7.7
05-08	2.4	170	974	930	1.32	936	428	236	3.2	1500	8.1
09-31	2.0	240	1040	1040	1.41	1310	360	166	5.1	1750	8.1
APR.											
01-30	1.3	310	1090	1080	1.48		362	179	5.5	1820	8.3
MAY											
01-31	.6	320		1140	1.55		372	191	6.1	1920	8.1
JUNE											
01-30	.6	340		1140	1.55		358	191	6.3	1980	8.2
JULY											
01-19	1.0	340	1220	1160	1.66		362	193	6.5	2050	8.0
20-21	1.0	320		869	1.18		392	71	3.7	1480	7.5
22-31	2.0	350		1110	1.51		364	187	5.9	1910	7.8
AUG.											
01-03	1.5	280		1310	1.78		525	344	4.8	2080	7.8
04-05	1.8	220		713	.97		292	128	3.6	1210	7.8
06-09	4.7	300		1120	1.52		355	194	6.1	1870	8.0
10-16	1.9	260		970	1.32		362	189	4.7	1620	7.6
17-21	1.3	220		805	1.09		302	126	4.2	1340	7.8
22	2.4	320		1190	1.62		370	203	6.4	1960	7.9
23	.8	220		755	1.03		292	108	4.0	1270	7.8
24	1.8	280		977	1.33		330	150	5.4	1620	7.7
25-31	1.4	320		1190	1.62		360	204	6.7	2030	8.1
SEP.											
01-05	2.2	330		1180	1.60		352	192	6.8	2010	7.9
06-07	4.8	220		841	1.14		362	208	3.4	1380	7.8
08-30	.9	290		1140	1.55		365	206	6.1	1910	B.0
WTD. AVG.					1.44		359	185	5.3	1760	8.0
TIME WTD.											
AVG.					1.52		392	218	5.2	1810	8.1
TOT. LOAD											
(TONS)											

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B. BOTTOM MITHDRAWAL TUBE: C. CHEMICALLY DISPERSED: N. IN NATIVE WATER: P. PIPET; S., SIEVE: V. YISUAL ACCUMULATION TUBE: M. IN DISTILLED MATER)

			MATER TEM-			SUSPENDEC					PART	CLE S	IZE					METHOD
			PERA- TURE	DISCHARGE		SEDIMENT DISCHARGE	PERCE	NT F	INER	THAN	THE S	ZE (1	N MII	LIMET	TERS)	INDIC	CATED	OF ANALY-
	DATE	TIME	(°C)	(CFS)	(MG/L)	( FONS/DAY)	.002	.CC4	.008	.016	.031	•062	.125	• 250	•500	1.00	2.00	SIS
NOV	17, 1970	170c	12.0	692	7630	14000	30	43		67		93	95	97	100			VPWC
MAR		1200	10.5	499C	8510	115000	29	40		65		76	82	90	97	100		VPWC
JUL	21	2700		1030	63700	177000	43	58		85		98	99	100				VPWC
AUG	4	1600		1410	48200	222000	47	56		80		98	99	100				VPWC
Au.	74	1300		820	28500	63100	53	67		AB		97	100					VPWC

### 09474000 GILA RIVER AT KELVIN, ARIZ. -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

						-1121 //2/100	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
BAY	ост	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1450	1690	1830	1910	1730		1750	1880	1930	2040	2050	2040
2	1450	1700	1790	2000	1730	1630	1770	1870	1950	2030	2030	2050
3	1460	1700	1800	2040	1700	580	1790	1910	1950	2020	2150	1930
4	1450	1700	1730	2030	1690	886	1780	1920	1950	2020	1040	2020
5	1450	1710	1720	2050	1700	1240	1780	1930	1940	2040	1370	2010
6	1460	1690	1780	1990	1710	1490	1790	1920	1950	2050	1910	1210
7	1460	1690	1790	2140	1710	1600	1790	1890	1940	2030	1840	1530
8	1480	1680	1800	2140	1690	1500	1760	1930	1950	2070	1920	1740
9	1480	1620	1740	2100	1690	1750	. 790	1940	1960	2070		1930
10	1480	1630	1740	2130	1690	1720	1790	1940	1960	2060		1890
11	1490	1620	1790	2100	1690	1700	1840	1950	1970	2050	1520	1910
12	1490	1590	1790	2100	1750	1720	1870	1930	1970	2070	1710	1890
13	1510	1780	1640	2130	1760	1760	1840	1930	2040	2050	1470	1780
14	1550	1790	1630	2020	1730	1720	1840		2020	2080	1860	1840
15	1520	1810	1650	2100	1760	1760	1830	1920	2010	2090	1620	1860
16	1520	1590	1650	2060	1750	1770		1950	2000	2070	1570	1910
17	1540	530	1640	2190	1750	1780	1840	1950	2010	2070		1920
18	1550	922	1650	2170	1730	1770	1810	1930	2030	2090	1180	1930
19	1570	1590	1660	2290	1740	1760	1830	1970	1990	2080	1320	1960
20	1570	1890	1660	2260	1740	1750		1970	1990		1410	1960
21	1560	2020	1670	2230	1710	1750	1840	1970	2010	1490	1410	1960
22	1530	2020		2190	1710	1750	1870	2000	2010	1740	1960	1950
23	1580	2060	1650	2100	1700	1750	1850	1970	2010	1870	1270	1960
24	1610	2100	1650	2210	1730	1750	1870	1970	2010	2020	1630	1980
25	1610	2170	1640	2260	1730	1750	1880	1930	2010	2030	1970	1980
26	1600	1820	1640	2170	1720	1750	1870	1930	2020	1820	2020	2010
27	1610	1930		2220	1720	1770	1870	1930	2010	1980	2000	2010
28	1610	1890	1650	2250	1730	1760	1860	1940	2010	2040	2040	
29	1630	1800	1600	2290		1770	1880	1940	2020	2070	2050	2000
30	1670	1820	1770	2290		1770	1920	1980	2020	1640	2060	2010
31	1700		1760			1760		1940		1990	2070	
AVG	1540	1720	1710	2140	1720	1640	1830	1940	1990	1990	1730	1900

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	ост	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
	25.0	18.0	14.0	9.0	7.0		16.0	17.0	24.0			
1	25.0	18.0	14.0	9.0	10.0	14.0	17.0	21.0	24.0			
<i>2</i> 3	25.0	20.0	14.0	9.0	10.0	11.0	17.0	20.0	25.0			
4	21.0	20.0	13.0	9.0	11.0	13.0	18.0	21.0	25.0			
5	22.0	17.0	11.0	10.0	13.0	13.0	18.0	21.0	25.0			
3	22.0	17.00	****									
6	23.0	18.0	11.0	9.0	13.0	17.0	18.0	23.0	24.0			
7	23.0	18.0	11.0	10.0	13.0	17.0	19.0	23.0	24.0			
é	25.0	18.0	11.0	10.0	13.0	17.0	19.0	21.0	24.0			
9	24.0	17.0	12.0	12.0	13.0	17.0	18.0	22.0	24.0			
10	23.0	18.0	14.0	13.0	13.0	14.0	19.0	23.0	24.0			
			•									
11	21.0	18.0	13.0	13.0	15.0	14.0	20.0	23.0	24.0			
12	20.0	18.0	12.0	17.0	15.0	15.0	19.0	23.0	24.0			
13	20.0	18.0	12.0	15.0	14.0	16.0	19.0	23.0	24.0			
14	20.0	18.0	12.0	16.0	14.0	17.0	18.0		26.0			
15	21.0	18.0	13.0	16.0	13.0	17.0	19.0	24.0	26.0			
15												
16	21.0	17.0	12.0	15.0	14.0	18.0		24.0	26.0			
17	22.0	12.0	13.0	16.0	14.0	17.0	17.0	23.0	26.0			
18	23.0	12.0	13.0	16.0	15.0	15.0	16.0	24.0	27.0			
19	20.0	12.0	13.0	16.0	13.0	15.0	17.0	24.0	27.0			
20	21.0	12.0	13.0	16.0	9.0	15.0		24.0	27.0			
20												
21	20.0	16.0	12.0	15.0	12.0	15.0	19.0	23.0	27.0			
22	18.0	15.0		16.0	14.0	17.0	18.0	23.0	27.0			
23	19.0	15.0	12.0	17.0	16.0	16.0	18.0	23.0	27.0			
24	20.0	16.0	12.0	16.0	14.0	17.0	16.0	24.0	27.0			
25	21.0	16.0	12.0	16.0	14.0	18.0	20.0	23.0	27.0			
26	22.0	16.0	12.0	16.0	13.0	18.0	20.0	22.0	27.0			
27	20.0	15.0		16.0	15.0	18.0	19.0	23.0	27.0			
28	20.0	11.0	10.0	16.0	14.0	16.0	19.0	24.0				
29	20.0	11.0	10.0	15.0		16.0	17.0	24.0				
30	19.0	14.0	11.0	15.0		16.0	17.0	24.0				
31	18.0		9.0			16.0		24.0				
AVG	21.5	16.0	12.0	14.0	13.0	16.0	18.0	22.5	25.5			

OCTOBER

TOTAL

149B

157.74

9675

10159

18186

86455

### 09474000 GILA RIVER AT KELVIN, ARIZ. -- Continued

265

DECEMBER

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

NOVEMBER

		OC TOBER			NUVERBER			DECEMBER	
DAY	MEAN DISCHARGE ICFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	191	93	48	114	33	10	72	151	29
2	189	89	45	115	57	18	71	61	12
3	195	73	38	114	50	15	72	89	i7
4	195	72	38	118	59	19	81	63	.14
5	193	67	35	113	68	21	81	68	15
6	193	58	30	114	34	10	81	54	12
7	197	40	21	113	30	9.2	79	49	10
8	176	35	17	113	35	11	79	63	13
9	158	28	12	125	45	15	81	B3	18
fe	153	50	21	127	55	19	81	54	12
11	157	98	42	130	1280	449	80	56	12
12	149	51	21	110	7490	2230	100	195	53
13	149	57	23	93	1450	364	131	307	109
14	151	47	19	93	435	109	144	315	122
15	153	55	23	91	300	74	146	278	110
16	157	44	19	109	1220	359	164	400	177
17	148	76	30	563	6550	11000	186	447	224
18	149	40	16	167	2460	1350	182	353	173
19	148	116	46	79	420	90	214	470	272
20	151	51	21	62	125	21	231	471	294
21	166	560	251	57	70	11	236	910	580
22	1 6B	1600	726	53	43	6.2	236	910	5B0
23	158	255	109	51	39	5.4	231	480	299
24	15B	86	37	49	27	3.6	244	295	194
25	155	B2	34	48	20	2.6	236	236	150
26	155	65	27	57	В3	13	231	202	126
27	151	106	43	65	93	16	241	280	182
28	151	68	28	64	96	17	241	390	254
29	149	91	37	68	111	20	257	254	176
30	134	50	18	71	110	21	241	203	132
31	117	29	9.2				153	122	50
TOTAL									
TOTAL	5014		1,884.2	3246		16309.0	4903		4421
TOTAL	5014	 January	1.884-2	3246	FEBRUARY	16309.0	4903	MARCH	4421
TOTAL	5014	JANUARY	1.884-2	3246	FEBRUARY	16309.0	4903	MARCH	4421
DAY	MEAN DISCHARGE (GFS)		1.884.2 SED I MENT DISCHARGE (TONS/DAY)	3246 MEAN DISCHARGE (CFS)		16309.0 SEDIMENT UISCHARGE (TONS/DAY)	4903 MEAN DISCHARGE (CFS)		SEDIMENT DISCHARGE (TONS/DAY)
DAY 1	MEAN DISCHARGE	JANUARY MEAN CONCEN- TRATION	SED I MENT DI SCHARGE	MEAN Discharge	FEBRUARY MEAN CONCEN- TRATION	SEDIMENT UISCHARGE	MEAN Discharge	MARCH MEAN CONCEY- TRATION	SEDIMENT DISCHARGE
DAY	MEAN Discharge (GFS)	JANUARY MEAN CDNCEN- TRATION (MG/L)	SED[MENT DIS!HARGE (TOMS/DAY) 12	MEAN Discharge (CFS) 268	FEBRUARY MEAN CONCEN- TRATION (MG/L) 483	SEDIMENT UISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS) 466	MARCH MEAN CONCEY- TRATION (MG/L) 348	SEDIMENT DISCHARGE (TONS/DAY)
DAY 1 2 3	MEAN DISCHARGE (CFS) 73 60 57	JANUARY  MEAN CONCEN- TRATION (MG/L)  62	SED (MENT DISCHARGE (TONS/DAY) 12 5.0 4.6	MEAN DISCHARGE (CFS)	FEBRUARY  MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS) 466 728	MARCH MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY) 43B 894
DAY 1 2 3	MEAN DISCHARGE (GFS) 73 60 57 55	JANUARY MEAN CONCEN- TRATION (MG/L) 62 31 30 41	SED   MENT DISCHARGE (TOHS/DAY) 12 5.0 4.6 6.1	MEAN DISCHARGE (CFS) 268 294 300 297	FEBRUARY  MEAN CONCEN- TRATION (MG/L)  483 340 344 351	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 281	MEAN DISCHARGE (CFS) 466 728 3910 884	MARCH MEAN CONCEY— TRATION (MG/L) 34B 455 5940 2430	SEDIMENT DISCHARGE (TONS/DAY) 43B B94 66900
DAY 1 2 3	MEAN DISCHARGE (CFS) 73 60 57	JANUARY MEAN CONCEN- TRATION (MG/L) 62 31 30	SED (MENT DISCHARGE (TONS/DAY) 12 5.0 4.6	MEAN DISCHARGE (CFS) 268 294 300	FEBRUARY MEAN CONCEN- TRATION (MG/L) 483 340 344	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279	MEAN DISCHARGE (CFS) 466 728 3910	MARCH MEAN CONCEY- TRATION (MG/L) 34B 455 5940	SEDIMENT DISCHARGE (TONS/DAY) 43B 894
DAY 1 2 3 4 5	MEAN OISCHARGE (GFS) 73 60 57 55 53	JANUARY MEAN CONCENTRATION (MG/L) 62 31 30 41 55	SEDIMENT DISLHARGE (TONS/DAY) 12 5.0 4.6 6.1 7.9 5.1	MEAN DISCHARGE (CFS) 268 294 297 297 315	FEBRUARY  MEAN CONCENTRATION (MG/L)  483 340 344 351 240 437	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 281 192 372	MEAN DISCHARGE (CFS) 466 728 3910 884 468 450	MARCH MEAN CONCEY- TRATION (MG/L) 348 455 5940 2430 520 460	SEDIMENT DISCHARGE (TOMS/DAY) 43B 894 66900 657 559
DAY 1 2 3 4 5	MEAN OISCHARGE (CFS) 73 60 57 55 53 50 48	JANUARY MEAN CONCEN- TRATION (MG/L) 62 31 30 41 55 38	SED [ MENT DISI:HARGE (TONS/DAY) 12 5.0 4.6 6.1 7.9 5.1	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341	FEBRUARY MEAN CONCENTRATION (MG/L) 483 340 344 351 240 437	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 281 192 372 359	MEAN DISCHARGE (CFS) 466 728 3910 884 468 450 254	MARCH MEAN CONCEY- TRATION (NG/L)  34B 455 5940 2430 520 460 112	SEDIMENT DISCHARGE (TONS/DAY) 43B 894 66900 657 559 77
DAY 1 2 3 4 5 6 7 8	MEAN DISCHARGE (CFS) 73 60 57 55 53 50 48	JANUARY MEAN CONCEN TRATION (MG/L)  31 30 41 55 38 110 199	SEDIMENT DISCHARGE (TONS/DAY) 12 5.0 4.6 6.1 7.9 5.1 14 25	MEAN DISCHARGE (CFS) 268 294 297 297 315 341 344	FEBRUARY MEAN CONCEN- TRATION (MG/L) 483 340 344 351 240 437 390 360	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 261 192 372 359 334	MEAN DISCHARGE (CFS) 466 728 3910 884 468 450 254 254	MARCH MEAN CONCEY- TRATION (MG/L)  348 455 5940 2430 520  460 112 268	SEDIMENT DISCHARGE (TOMS/DAY) 43B 894 66900 657 559 77 201
DAY 1 2 3 4 5 6 7 8 9	MEAN OISCHARGE (CFS) 73 60 57 55 53 50 48 46 48	JANUARY MEAN CONCEN- TRATIDN (MG/L) 62 31 30 41 55 38 110 199 79	SED [ MENT DISI:HARGE (TOMS/DAY) 12 5.0 4.6 6.1 7.9 5.1 14 25	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341 344 347	FEBRUARY  MEAN CONCEN- TRATION (MG/L)  483 340 344 351 240 437 390 360 330	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 281 192 372 359 334 309	MEAN DISCHARGE (CFS) 466 728 3910 884 468 450 254	MARCH MEAN CONCEY- TRATION (MG/L)  348 455 5940 2430 520 460 112 268 260	SEDIMENT DISCHARGE (TONS/DAY) 438 894 66900 657 559 77 201 208
DAY 1 2 3 4 5 6 7 8	MEAN DISCHARGE (CFS) 73 60 57 55 53 50 48	JANUARY MEAN CONCEN TRATION (MG/L)  31 30 41 55 38 110 199	SEDIMENT DISCHARGE (TONS/DAY) 12 5.0 4.6 6.1 7.9 5.1 14 25	MEAN DISCHARGE (CFS) 268 294 297 297 315 341 344	FEBRUARY MEAN CONCEN- TRATION (MG/L) 483 340 344 351 240 437 390 360	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 261 192 372 359 334	MEAN DISCHARGE (CFS) 466 728 3910 884 468 450 254 254	MARCH MEAN CONCEY- TRATION (MG/L)  348 455 5940 2430 520  460 112 268	SEDIMENT DISCHARGE (TOMS/DAY) 43B 894 66900 657 559 77 201
DAY 1 2 3 4 5 6 7 8 9 10	MEAN DISCHARGE (CFS) 73 60 57 55 53 50 48 46 48 48	JANUARY MEAN CONCEN- TRAITION (MG/L) 62 31 30 41 55 38 110 199 79 30	SED [ MENT DISI:MARGE (TDMS/DAY) 12 5.0 4.6 6.1 7.9 5.1 14 25 10 3.9	MEAN DISCHARGE (CFS) 268 294 297 297 315 341 344 347 354	FEBRUARY MEAN CONCENTRATION (NG/L) 483 340 351 251 2437 390 360 330 410	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 261 192 372 359 334 309 392 418	MEAN DISCHARGE (CFS) 466 728 3910 884 468 450 254 297 320 431	MARCH MEAN CONCEY- TRATION (MG/L) 348 455 5940 2430 520 460 112 268 260 380 582	SEDIMENT DISCHARGE (TOMS/DAY) 43B 894 66900 657 559 77 201 208 289
DAY  1 2 3 4 5 6 7 8 9 10	MEAN OISCHARGE (CFS) 73 60 57 55 53 50 48 46 48 48	JANUARY  HEAN CONCENTRATION (MG/L)  62 31 30 41 55 38 110 199 79 30 29 17	SED [ MENT DISI:HARGE (TDIS/DAY) 12 5.0 4.6 6.1 7.9 5.1 14 25 10 3.9 3.8 2.1	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341 344 347 354 358	FEBRUARY MEAN CONCENTRATION (MG/L) 483 340 344 351 240 437 390 360 330 410 432 320	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 281 192 372 359 334 309 392 418 309	MEAN DISCHARGE (CFS) 466 728 3910 884 468 450 254 254 297 320 431 421	MARCH MEAN CONCENTRATION (MG/L) 348 455 5940 2520 460 112 268 260 380 582	SEDIMENT DISCHARGE (TONS/DAY) 438 894 66900 657 559 77 201 208 289 677 455
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13	MEAN DISCHARGE (CFS) 73 60 57 55 53 50 48 46 48 48 48	JANUARY MEAN CONCEN- TRAITION (MG/L) 62 31 30 41 55 38 110 199 79 30 29 17 12	SED [ MENT DISI:MARGE (TDMS/DAY) 12 5.0 4.6 6.1 7.9 5.1 14 25 10 3.9 3.8 2.1 1.5	MEAN DISCHARGE (CFS) 268 294 300 297 315 341 344 347 354 358 358 361	FEBRUARY MEAN CONCENTRATION (NG/L) 483 340 351 243 360 330 410 432 320 300	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 281 192 372 359 334 309 392 418 309 292	MEAN DISCHARGE (CFS) 466 728 3910 884 468 450 254 297 320 431 421 377	MARCH MEAN CONCEY- TRATTOM (NG/L)  348 455 5940 2430 520 460 112 268 260 380 582 400 223	SEDIMENT DISCHARGE (TONS/DAY) 43B 894 66900 657 559 77 201 208 289 677 455 227
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14	MEAN OISCHARGE (CFS) 73 60 57 55 53 50 48 46 48 48 48	JANUARY  MEAN CONCENTRATION (MG/L)  62 31 30 41 55 38 110 199 79 30 29 17 12 16	SED [ MENT DISLHARGE (TDIS/DAY) 12 5.0 4.6 6.1 7.9 5.1 14 25 10 3.9 3.8 2.1 1.5	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341 344 347 354 358 361 351	FEBRUARY MEAN CONCENTRATION (MG/L) 483 340 344 351 240 437 390 360 330 410 432 320 300 540	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 281 192 359 334 309 392 418 309 292 512	MEAN DI SCHARGE (CFS) 466 728 3910 884 468 450 254 254 297 320 431 421 377 338	MARCH MEAN CONCENTRATION (MG/L) 348 455 5940 2520 460 112 268 260 380 582 400 223 169	SEDIMENT DISCHARGE (TONS/DAY) 438 894 66900 657 559 77 201 208 289 677 455 227
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13	MEAN DISCHARGE (CFS) 73 60 57 55 53 50 48 46 48 48 48	JANUARY MEAN CONCEN- TRAITION (MG/L) 62 31 30 41 55 38 110 199 79 30 29 17 12	SED [ MENT DISI:MARGE (TDMS/DAY) 12 5.0 4.6 6.1 7.9 5.1 14 25 10 3.9 3.8 2.1 1.5	MEAN DISCHARGE (CFS) 268 294 300 297 315 341 344 347 354 358 358 361	FEBRUARY MEAN CONCENTRATION (NG/L) 483 340 351 243 360 330 410 432 320 300	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 281 192 372 359 334 309 392 418 309 292	MEAN DISCHARGE (CFS) 466 728 3910 884 468 450 254 297 320 431 421 377	MARCH MEAN CONCEY- TRATTOM (NG/L)  348 455 5940 2430 520 460 112 268 260 380 582 400 223	SEDIMENT DISCHARGE (TONS/DAY) 43B 894 66900 657 559 77 201 208 289 677 455 227
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	MEAN OISCHARGE (CFS) 73 60 57 35 53 50 48 46 48 48 48 46 45 45	JANUARY MEAN CONCEN- TRAITION (MG/L) 62 31 30 41 55 3B 110 199 79 30 29 17 12 16 13	SED ( MENT DISCHARGE (TOHS/DAY) 12 5.0 4.6 6.1 7.9 5.1 14 25 10 3.9 3.8 2.1 1.5 1.9	MEAN DISCHARGE (CFS) 268 294 300 297 315 341 344 347 354 358 358 361 351 344 341	FEBRUARY MEAN CONCENTRATION (NG/L) 483 340 351 251 2437 390 360 330 410 432 320 540 325 335	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 281 192 372 359 334 309 392 418 309 292 512 302	MEAN DI SCHARGE (CFS) 466 728 3910 884 450 254 297 320 431 421 377 338 309 294	MARCH MEAN CONCEY- TRATION (NG/L)  348 455 5940 2330 520 460 112 268 260 380 223 169 170 169	SEDIMENT DISCHARGE (TONS/DAY) 438 894 66900 657 559 77 201 208 289 677 455 227 154 142
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MEAN OISCHARGE (CFS) 73 60 57 55 53 50 48 46 48 48 48 46 45 45 45	JANUARY  MEAN CONCENTRATION (MG/L)  62 31 30 41 55 38 110 199 79 30 29 17 12 16 13 16	SED [ MENT DISCHARGE (TOMS/DAY)  12	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341 344 347 354 358 361 351 344 341	FEBRUARY MEAN CONCENTRATION (MG/L) 483 340 344 351 240 437 390 360 330 410 432 320 300 540 325 335	SEDIMENT UISCHARGE (TONS/DAY)  349 270 279 281 192 372 359 334 309 392 418 309 292 512 302 308	MEAN DI SCHARGE (CFS) 466 728 3910 884 468 450 254 254 297 320 431 421 377 338 309 294	MARCH MEAN CONCENTRATION (MG/L) 348 455 5940 2430 2520 460 112 268 268 269 170 169 170	SEDIMENT DISCHARGE (TONS/DAY) 438 894 66900 657 559 77 201 208 289 677 455 227 154 142
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MEAN OISCHARGE (CFS) 73 60 57 55 53 50 48 46 48 48 46 45 45 45 45	JANUARY MEAN CONCEN- TRAITION (MG/L) 62 31 30 41 55 38 110 199 79 30 29 17 12 16 13 16 14 14	SED ( MENT DISCHARGE (TOHS/DAY)  12 5.0 4.6 6.1 7.9 5.1 14 25 10 3.9 3.8 2.1 1.5 1.9 1.6	MEAN DISCHARGE (ICFS) 268 294 300 297 315 341 347 354 358 358 358 361 351 344 347	FEBRUARY MEAN CONCENTRATION (NG/L) 483 340 351 243 360 360 360 360 360 360 360 360 360 36	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 281 192 372 359 334 309 992 418 309 292 512 302	MEAN DI SCHARGE (CFS) 466 728 3910 884 468 450 254 297 320 431 421 377 338 309 294 312 361	MARCH MEAN CONCENTRATION (NG/L)  348 455 5940 2330 520 460 112 268 260 380 223 169 170 169 230 420	SEDIMENT DISCHARGE (TONS/DAY) 43B 894 66900 657 77 201 208 289 289 477 455 227 154 142 134 194
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MEAN OISCHARGE (CFS) 73 60 57 55 53 50 48 46 48 48 46 45 45 45 45 45 45 45 45 45 45 45 45 45	JANUARY  MEAN CONCENTRATION (MG/L)  62 31 30 41 55 38 110 199 79 30 29 17 12 16 13 16 14 14	SED [ MENT DISLHARGE (TOMS/DAY) 12 5.0 4.6 6.1 7.9 5.1 14 25 10 3.9 3.8 2.1 1.5 1.9 1.6	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341 344 347 354 358 361 351 344 347 344 347	FEBRUARY MEAN CONCENTRATION (MG/L)  483 340 344 351 240 437 390 360 330 410 432 320 300 540 325 325 325 224 296	SEDIMENT UISCHARGE (TONS/DAY)  349 270 279 281 192 372 359 334 309 392 418 309 292 512 302 308 273 277	MEAN DI SCHARGE (CFS) 466 728 3910 884 468 450 254 254 254 27 320 431 421 377 338 309 294 312 361 382	MARCH MEAN CONCENTRATION (MG/L) 348 455 5940 2430 2520 460 380 580 580 223 400 223 400 223 400 233	SEDIMENT DISCHARGE (TONS/DAY) 438 894 66990 657 559 77 201 208 289 677 455 227 154 142
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MEAN OISCHARGE (CFS) 73 60 57 55 53 50 48 46 48 48 46 45 45 45 45 45 45 45 45 45 45 45 45 45	JANUARY  MEAN CONCENTRATION (MG/L)  62 31 30 41 55 38 110 199 79 30 29 17 12 16 13 16 14 14 14	SED [ MENT DISCHARGE (TONS/DAY)  12 4.6 6.1 7.9 5.1 14 25 10 3.9 3.8 2.1 1.5 1.9 1.6 1.9 1.7 1.6 1.4 1.3	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341 344 347 354 358 361 351 344 347 344 347	FEBRUARY MEAN CONCENTRATION (MG/L)  483 340 344 351 240 437 390 360 330 410 432 320 300 540 325 335 294 296 296	SEDIMENT UISCHARGE (TONS/DAY)  349 270 279 281 192 359 334 309 392 418 309 292 512 302 308 273 277 185 299	MEAN DI SCHARGE (CFS) 466 728 3910 884 468 450 254 254 254 27 320 431 421 377 338 309 294 312 361 382 400	MARCH MEAN CONCETUN (MG/L) 348 455 5940 2430 2430 268 268 268 268 269 170 169 170 169 230 430 230 230	SEDIMENT DISCHARGE (TONS/DAY) 438 894 66900 657 559 77 201 208 289 677 455 227 154 142 134 194 409 350 281
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 29 21	MEAN OISCHARGE (CFS) 73 60 57 53 53 50 48 46 48 48 48 46 45 45 45 45 45 46 44 43 43 43 43	JANUARY MEAN CONCEN- TRATION (MG/L) 62 31 30 41 55 38 110 199 79 30 29 17 12 16 13 16 14 14 12 11	SED! MENT DISCHARGE (TONS/DAY) 12 4.6 6.1 7.9 5.1 14 25 3.9 2.1 1.5 1.9 1.6 1.9	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341 344 358 358 361 351 344 344 347 344 347 344 347	FEBRUARY MEAN CONCENTRATION (NG/L)  483 344 351 240 360 360 360 37 390 410 432 320 540 325 294 296 199 322 314	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 279 359 334 309 392 418 309 309 202 202 512 308 273 277 185 299	MEAN DI SCHARGE (CFS) 466 728 3910 884 468 450 254 297 320 431 421 377 338 309 294 312 361 382 400 462	MARCH MEAN CONCENTRATION (NG/L)  348 455 5940 230 520  460 112 268 260 380 223 169 170  169 230 330 335	SEDIMENT DISCHARGE (TONS/DAY) 43B 894 66900 657 77 201 208 289 677 455 227 154 142 134 194 409 350 281
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MEAN OISCHARGE (CFS) 73 60 57 75 53 50 48 46 48 48 48 46 45 45 45 45 45 46 43 43 43 43 43	JANUARY  MEAN CONCENTRATION (MG/L)  62 31 30 41 55 38 110 199 79 30 29 17 12 16 13 16 14 14 14 12 11	SED [ MENT DISCHARGE (TOMS/DAY)  12	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341 344 347 354 358 361 351 344 347 344 347 344 347 344 347	FEBRUARY MEAN CONCENTRATION (MG/L)  483 340 344 351 240 437 390 360 330 410 432 320 300 540 325 335 294 296 296 296 292 314 280	SEDIMENT UISCHARGE (TONS/DAY)  349 270 279 281 192 359 334 309 392 418 309 292 512 302 308 273 277 185 299 287 260	MEAN DI SCHARGE (CFS) 466 728 3910 884 468 450 254 254 257 320 431 421 377 338 309 294 312 361 362 400	MARCH MEAN CONCENTRATION (MG/L)  348 455 5940 2430 2430 268 268 268 269 170 169 170 169 230 420 330 430 335	SEDIMENT DISCHARGE (TONS/DAY) 43B 894 66900 657 559 77 201 208 289 677 455 227 154 142 134 194 409 350 281
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 29 21 22 23	MEAN OISCHARGE (CFS) 73 60 57 53 53 50 48 46 48 48 46 45 45 45 45 45 46 44 43 43 43 43 43 44 44 44 44 43	JANUARY MEAN CONCENTRATION (MG/L) 62 31 30 41 55 38 110 199 79 30 29 17 12 16 13 16 14 14 12 11	SED ( MENT DISCHARGE ( TONS/ DAY) 12 4.6 6.1 7.9 5.1 14 25 3.9 3.8 2.1 1.5 1.9 1.6 1.9	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341 344 358 358 361 351 344 344 347 344 344 347	FEBRUARY MEAN CONCENTRATION (NG/L)  483 344 351 240  437 390 360 330 410  432 320 340 432 320 340 432 320 340 442 340 340 442 340 340 442 340 340 340 340 442 340 340 340 340 340 340 340 340 340 340	SEDIMENT UISCHARGE (TONS/DAY) 349 270 279 219 192 372 359 334 309 399 418 309 309 202 212 302 202 217 185 209 209 209 209 209 209 209 209 209 209	MEAN DI SCHARGE (CFS) 466 728 3910 884 468 450 254 254 257 320 431 421 377 338 309 294 312 381 382 400 462 514	MARCH MEAN CONCENT TRATION (MG/L)  348 455 520  460 112 268 260 380 223 169 270 170  169 230 320 3355 435	SEDIMENT DISCHARGE (TONS/DAY) 43B 894 66900 657 77 201 208 289 677 455 227 154 142 134 194 409 350 281
DAY  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MEAN OISCHARGE (CFS) 73 60 57 75 53 50 48 46 48 48 48 46 45 45 45 45 45 46 43 43 43 43 43	JANUARY  MEAN CONCENTRATION (MG/L)  62 31 30 41 55 38 110 199 79 30 29 17 12 16 13 16 14 14 14 12 11	SED [ MENT DISCHARGE (TOMS/DAY)  12	MEAN DISCHARGE (CFS) 268 294 300 297 297 315 341 344 347 354 358 361 351 344 347 344 347 344 347 344 347	FEBRUARY MEAN CONCENTRATION (MG/L)  483 340 344 351 240 437 390 360 330 410 432 320 300 540 325 335 294 296 296 296 292 314 280	SEDIMENT UISCHARGE (TONS/DAY)  349 270 279 281 192 359 334 309 392 418 309 292 512 302 308 273 277 185 299 287 260	MEAN DI SCHARGE (CFS) 466 728 3910 884 468 450 254 254 257 320 431 421 377 338 309 294 312 361 362 400	MARCH MEAN CONCENTRATION (MG/L)  348 455 5940 2430 2430 268 268 268 269 170 169 170 169 230 420 330 430 335	SEDIMENT DISCHARGE (TONS/DAY) 43B 894 66900 657 559 77 201 208 289 677 455 227 154 142 134 194 409 350 281

### 09474000 GILA RIVER AT KELVIN, ARIZ, -- Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		APRIL			MAY			JUNE	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)
1	618	265	442	410	210	232	389	179	168
ż	562	270	410	414	. 130	145	392	172	182
3	518	208	291	414	232	259	390	190	200
4	486	149	196	414	180	201	380	211	216
5	470	168	213	462	133	166	380	254	261
6	462	230	297	482	240	312	390	213	224
7	462	150	187	486	220	289	400	200	216
8	502	283	380	486	143	188	400	205	221
9	514	255	354	486	165	217	400	229	247
10	534	170	245	482	153	199	410	289	320
11	534	215	310	458	194	240	420	242	274
12 13	522 526	110	155	502	245	332	430	224	260
14	542	112 246	159 360	526	218	310	450	230	279
15	562	310	470	526 518	180 153	256 214	450 450	229 219	278 266
16	558	297	447	510	225	310	440	207	246
17	566	185	283	494	506	275	440	173	2D6
18 19	578 570	248	387	478	233	301	440	144	171
20	522	250 230	385	482	229	298	430	189	219
		230	324	443	183	219	430	212	246
21	498	176	237	443	219	262	430	223	259
22	454	150	184	443	200	239	450	225	213
23	414	151	169	443	213	255	460	187	232
24 25	407 407	145 161	159 177	443	198	237	470	170	216
•			177	443	233	279	500	154	208
26	400	170	184	432	159	185	500	160	216
27	410	170	188	421	140	159	510	256	353
28	410	228	252	407	151	166	510	338	465
29	414	210	235	389	162	170	520	258	362
30	425	190	218	389	141	148	540	400	583
31				382	158	163			
TOTAL	14847		8288	14108		T226	13201		7887
		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	ME4N Discharge (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)
1	560	1460	2200	454	3600	4410	350	930	879
ž	546	990	1460	716	17900	50300	350	1050	992
3	542	410	600	902	45000	114000	350	5200	4910
4	542	279	408	1190	54800	182000	407	3600	3960
5	514	270	375	615	26800	49900	421	2200	2500

		JOE .			MUG031			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	ME4N D1SCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT Discharge (Tons/Day)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TDNS/DAY)
1	560	1460	2200	454	3600	4410	350	930	879
2	546	990	1460	716	17900	50300	350	1050	992
3	542	410	600	902	45000	114000	350	5200	4910
4	542	279	408	1190	54800	182000	407	3600	3960
5	514	270	375	615	26800	49900	421	2200	2500
6	533	275	394	382	9200	9490	1920	25100	136000
7	546	290	428	378	10500	10700	638	8940	18900
8	554	300	449	492	9910	12100	176	2000	961
9	57B	305	476	428	7900	9130	175	1170	680
10	582	370	581	822	19900	63400	271	1340	980
11	5 TC	270	416	928	31100	80200	262	890	630
12	5 T B	222	346	588	25700	42200	246	830	551
13	578	186	281	361	24800	24200	245	3520	2330
14	558	265	399	178	12000	5770	240	3040	1970
15	610	365	601	662	20100	39600	240	1250	810
16	618	252	420	647	23300	53200	240	680	441
17	610	32 <b>0</b>	527	985	35700	110000	240	460	298
18	646	270	471	1036	52400	148000	240	380	246
19	670	160	289	788	34600	74800	230	340	211
20	728	513C	19900	466	19100	25200	230	580	360
21	1360	51100	187000	350	23100	21800	230	350	217
22	610	18500	30500	300	9200	7450	230	175	109
23	600	11500	18600	350	11200	10600	220	175	104
24	598	7060	11300	400	21900	23700	200	203	108
25	565	4600	7020	350	8900	8410	190	180	92
26	549	10100	16600	350	2150	2030	180	200	97
27	566	12700	19400	350	1000	945	180	240	117
58	502	5000	6780	300	720	583	160	300	130
29	494	1700	2270	30.	675	547	160	240	104
30	614	27000	46900	300	710	575	160	150	65
31	470	11203	14100	325	775	680			
TOTAL	18558		391491	16591		1185920	9383		179752

129240 1899949.94

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TUNS)

#### GILA RIVER BASIN

#### 0950 2000 SALT RIVER BELOW STEWART MOUNTAIN DAM, ARIZ. (Irrigation network station)

LOCATION. --Lat 33°33'59", long 111°32'08"; in sec.33, T.3 N., R.8 E. (unsurveyed), Maricopa County, at Stewart Mountain Dam, 3.5 miles upstream from gaging station and 9.5 miles upstream from Verde River.

DRAINAGE AREA. --6,232 sq mi, at gaging station, of which 21 sq mi is downstream from Stewart Mountain Dam.

PERIOD OF RECORD. --Chemical analyses: December 1950 to September 1970.

Water temperatures: December 1950 to September 1970.

EXTREMES. -1969-70:

Dissolved solids: Maximum, 603 mg/l Aug. 1-31; minimum, 509 mg/l Oct. 1-31.

Hardness: Maximum, 181 mg/l Aug. 1-31; minimum, 165 mg/l Oct. 1-31.

Specific conductance: Maximum daily, 1,120 micromhos Aug. 22, Sept. 5, 8-11; minimum daily 917 micromhos Oct. 2.

Specific conductance: Maximum daily, 1,120 micromnos aug. 22, 5ept. 3, 6-11, minimum, 21.0°C Aug. 26; minimum, 10.0°C on several days during January and February. Period of record:
Dissolved solids: Maximum, 1,300 mg/l Aug. 21-28, 1951; minimum, 361 mg/l Mar. 21-31, 1953.
Hardness: Maximum, 270 mg/l Nov. 1-30, 1956; minimum, 121 mg/l Dec. 22-23, 1967.
Specific conductance: Maximum daily, 2,490 micrombos Aug. 20, 1951; minimum daily (1950-64, 1965-70), 820 micrombos Mar. 28, 1953.
Water temperatures: Maximum, 29.0°C Aug. 24, 26, 27, 1951, Sept. 11, 12, 1969; minimum, 9.5°C Feb. 14, 1951.
REMARKS.--No inflow between sampling point and gaging station except during periods of heavy local rains. No flow at sampling point Nov. 2-30.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 DIS-

DATE	MEAN DIS- CHARGE (CFS)	BIS- SOLVED SILICA (SIO2) (MO/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)		DIS- SOLVEI SULFATI (804) (MG/L	D CHLO- E RIDE (CL)	DIS- D SOLVED FLUO- RIDE (F) ) (MG/L)
0CT. 01-31	866	20	49	5.5		125		155	0	48	184	
NOV.	172	21	44	14		125		144	2	48	190	
DEC. 01-31	796	18	47	13		128		162	0	49	188	
JAN. 01-31	172	18	47	13		128		153	2	48	190	
FEB. 01-28	757	18	47	13		138		167	0	50	200	
MAR. 01-31	649	18	54	9.1		141		158	0	54	206	
APR. 01-30	1440	16	46	14	132		4.6	160	0	52	208	
MAY 01-31					132		4.0					. 4
JUNE	1600	15	50	12		148		158	0	53	222	
01-30 JULY	2050	16	52	12		148		157	0	54	224	
01-31 AUG,	1600	15	51	13	146		4.8	151	3	54	234	.4
01-31 SEP.	1280	16	54	11		155		152	2	54	236	
01-30	1110	16	49	14		152		156	0	54	230	
WTD. AVG. TIME WTD.		16	50	12		144		157	1	53	217	
AVG. TOT. LOAD	A1120	17	50	12		140		157	1	52	211	
(TONS)		16600	50700 1	2100	1	10000		159000	646	53300	220000	
DATE	DIS_ SOLVED NITRATE (NO3) (MG/L)		DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVEI SOLIDS (SUM OF CONSTI- TUENTS (MG/L	SOLVE SOLIE (TONS	ED SOLV DS SOLI S (TON PER	ED DS HAR IS NES	RD- BI SS H	NON- CAR- ONATE ARD- ESS MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT. 01-31	SOLVED NITRATE (NO3)	SOLVED BORON (B)	SOLVED SOLIDS (RESI- DUE AT 180°C)	SOLVEI SOLIDS (SUM OF CONSTI- TUENTS	S SOLVE SOLIE (TONS ) PER ) AC-FT	ED SOLV DS SOLI G (TON PER T) DAY	ED DS HAR S NES (CA,	RD- BI SS H	CAR- ONATE ARD- ESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO-	
0CT. 01-31 NOV. 01	SOLVED NITRATE (NO3) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVEI SOLIDS (SUM OF CONSTI- TUENTS (MG/L	S SOLVE SOLIE (TONS) PER AC-FT	ED SOLV DS SOLI S (TON PER T) DAY	ED DS HAF S NES (CA;	RD- B( SS H/ MG, N( 3/L) ((	CAR- ONATE ARD- ESS MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
OCT. 01-31 NOV. 01 DEC. 01-31	SOLVED NITRATE (NO3) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVEI SOLIDS (SUM OF CONSTI- TUENTS (MG/L	S SOLVE SOLIE - (TONS PER D AC-FT	ED SOLV DS SOLI S (TON PER T) DAY	DS HAR IS NES (CA) (MG	RD- B(SS H) MG, N(S)/L) (1	CAR- ONATE ARD- ESS MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
OCT. 01-31 NOV. 01 DEC. 01-31 JAN. 01-31	SOLVED NITRATE (NO3) (MG/L) 1.0	SOLVED BORON (B) (UG/L) 140	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVEI SOLIDS (SUM OF CONSTI- TUENTS (MG/L.	S SOLVE F SOLIE - (TONS ) PER AC-FT 7 .6	ED SOLV OS SOLI SOLI SOLI TON PER T) DAY 59 11 70 2	ED HAR S NES (CA, ') (MG	RD- B( SS H/ MG, N( 3/L) (1 165	CAR- ONATE ARD- ESS MG/L) 38	AD- SORP- TION RATIO 4.2	FIC COND- UCTANCE (MICRO- MHOS) 929 926	1UNITS) 8.1 8.4
OCT. 01-31 NOV. 01 DEC. 01-31 JAN. 01-31 FEB. 01-28	SOLVED NITRATE (NO3) (MG/L) 1.0 1.2	SOLVED BORON (B) (UG/L) 140 110	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVEI SOLIDS (SUM OF CONSTI- TUENTS (MG/L) 504	S SOLVE SOLIE SOLIE (TONS PER AC-FT 7 .6 .7	ED SOLVES SOLVES SOLVES (TON PER DAY 11 2 2 11 2	ED DS HAR S NES (CA; ) (MG	RD- BI SS HI MG, NI 3/L) (1 165 168	CAR- ONATE ARD- ESS MG/L) 38 46	AD- SORP- TION RATIO 4.2 4.2	FIC COND- UCTANCE (MICRO- MHOS) 929 926	8.1 8.4 8.2
OCT. 01-31 NOV. 01 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31	SOLVED NITRATE (NO3) (MG/L) 1.0 1.2	SOLVED BORON (B) (UG/L) 140 110 180	SOL VED SOL IDS (RESI- DUE AT 180°C) (MG/L)	SOLVEI SOLIDI (SUM OF CONSTI- TUENTS (MG/L. 50° 516 524	S SOLVE SOLIE (TONS PER AC-FT 7 .6 .7 .7 .7 .7	SOLV SS SOLV SOLV SOLV TON PER DAY 59 11 70 2 71 11 71 2	ED HAR DS HAR S (CA) (CA) (MG) 90 40 30 42	RD- B( RD- B( RD	CAR- ONATE ARD- ESS MG/L) 38 46 39	AD- SORP- TION RATIO 4.2 4.2 4.2 4.2	FIC COND- UCTANCE (MICRO- MHOS) 929 926 946	8.1 8.4 8.2 8.0
OCT. 01-31 NOV. 01 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 01-30	SOLVED NITRATE (NO3) (MG/L) 1.0 1.2 1.0	SOLVED BORON (B) (UG/L) 140 110 180 120	SOL VED SOL IDS (RESI- DUE AT 180°C) (MG/L)	SOLVEI SOLIDE (SUM OF CONSTI- TUENTS (MG/L) 504 516 524 524	S SOLVE SOLITE SOLITE (TONS PER AC-FT6 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7	ED SOLV SOLV SOLV SOLV SOLV SOLV SOLV SOLV	ED HAR S NES (CA, ) (MG 90 40 30 42 20	RD- BI SS HI MG, NI 165 168 172 170	CAR- ONATE ARD- ESS MG/L) 38 46 39 41	AD- SORP- TION RATIO 4.2 4.2 4.2 4.3 4.6	FIC COND- UCTANCE (MICRO- MHOS) 929 926 946 939	9.1 8.4 8.2 8.0 8.2
OCT. 01-31 NOV. 01 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-30 MAY 01-31	SOLVED NITRATE (NO3) (MG/L) 1.0 1.2 1.0	SOLVED BORON (B) (UG/L) 140 110 180 120	SOL VED SOL IDS (RESI- DUE AT 180°C) (MG/L)	SOLVEI SOLIDI (SUM OI CONSTI- TUENTS (MG/L. 50° 510 524 522 549 562	SOLVE SOLITION OF THE PROPERTY	ED SOLVES SOLVES SOLVES SOLL SOLL SOLL SOLL SOLL SOLL SOLL SO	ED HAFF 10 10 10 10 10 10 10 10 10 10 10 10 10	RD- BI SS HI MG, NI 3/L) (I 165 168 172 170 172	CAR- ONATE AARD- ESS MG/L) 38 46 39 41 35	AD- SORP- TION RATIO 4.2 4.2 4.2 4.3 4.6 4.7	FIC COND- UCTANCE (MICRO- MHOS) 929 926 946 939 994	8.1 8.4 8.2 8.0 8.2
OCT. 01-31 NOV. 01 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 01-30 MAY 01-31 JUNE 01-30	SOLVED NITRATE (NO3) (MG/L) 1.0 1.2 1.0 1.1 .6	SOLVED BORON (B) (UG/L) 140 110 180 120 130	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOL VEI SOL IDE (SUM OF CONSTI- TUENTS (MG/L. 50° 516 524 522 549 562	SOLVED SO	ED SOLVES SOLVES SOLL S SOLL S SOLL S SOLL S (TON) PER	ED DS HAFF S NES (CA) (M6 90 40 30 42 20 73 10 660	RD- BIR SS HHG, NI HG, NI 165 168 172 170 172 172	CAR- ONATE ARD- ESS HG/L) 38 46 39 41 35 42	AD- SORP- TION RATIO 4.2 4.2 4.2 4.3 4.6 4.7	FIC COND- UCTANCE (MICRO- MHOS) 929 926 946 939 994 994 1010	1UNITS) 8.1 8.4 8.2 8.0 8.2
OCT. 01-31 NDV. 01 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 01-30 MAY 01-31 JUNE 01-30 JULY 01-31	SOLVED NITRATE (NO3) (MG/L) 1.0 1.2 1.0 1.1 .6 1.6	SQLVED BORON (B) (UG/L) 140 110 180 120 130 120 150	SOLUPE SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOL VEI SOL IDI (SUM OF CONSTI- TUENTS (MG/L. 50° 514 524 525 545 552 552	S SOLVE SOLV	ED SOLVE SOL	ED DS HARR S NEE: (CA) (MG	RD- BI	CAR- ONATE O	AD- SORP- TION RATIO 4.2 4.2 4.2 4.3 4.6 4.7 4.4	FIC COND- COND- UCTANCE (MICRO- MHOS) 929 926 946 939 994 994	1UNITS) 8.1 8.4 8.2 8.0 8.2 8.0 7.9
OCT. 01-31 NDV. 01 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-30 MAY 01-31 JUNE 01-31 JULY 01-31 AUG. 01-31	SQL VED NJTRATE (NO3) (MG/L) 1.0 1.2 1.0 1.1 .6 1.6	SOLVED BORON (B) (U6/L) 140 110 120 120 150 160 160	SOL UPD SOL IDS (RESI- DE AT 180°C) (MG/L)	SOL VEI SOL IDI (SUM OF CONSTI- TUENTS (MG/L. 50° 516 524 527 545 552 578	SOLVEY SO	ED SOLUTION	ED DS HARR S NEE: (CA) (M6 90 40 30 42 20 73 10 60 60 60 60 60 60 60 60 60 60 60 60 60	RB- BI SE	CARTE ON A TENT OF THE TENT OF	SORP- SORP- TION RATIO 4.2 4.2 4.2 4.3 4.6 4.7 4.4	FIC COND- COND- UCTANCE (MICRO- MHOS) 929 926 946 939 994 994 1010	9.1 8.4 8.2 8.0 8.2 8.0 8.1 7.9
OCT. 01-31 NOV. 01 DEC. 01-31 JAN. 01-31 FEB 01-28 MAR. 01-31 APR. 01-30 MAY 01-31 JUNE 01-30 JULY 01-31 JUNE 01-31 JU	SQL VED NJTRATE (NO3) (MG/L) 1.0 1.2 1.0 1.1 .6 1.6 .3 .1 .1 .0	SOLVED BORON (B) (UG/L) 140 110 120 120 150 160 160 160 160 160	SOL UPD SOL IDS (RESI- DE AT 180°C) (MG/L)	SOL VEI SOL IDI (SUM OI CONSTI- TUENTS (M6/L 50' 514 522 545 545 552 578 583 595	SOLVEY SO	ED SOLUTION	ED DS HARRING (CA) (CA) (CA) (CA) (CA) (CA) (CA) (CA)	RB- BI	CARTE ON ATTE OF THE PROPERTY	SORP- TION RATIO 4.2 4.2 4.2 4.3 4.6 4.7 4.4 4.8	FIC COND- COND- UCTANCE (MICRO- MHOS) 929 926 946 939 994 994 1010 1050 1080	1UNITS) 8.1 8.4 8.2 8.0 8.2 8.0 8.1 7.9 8.1 8.4
OCT. 01-31 NDV. 01 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 JUNE 01-30 JULY 01-31 AUG. 01-31 SEP. 01-30 WTD. AVG	SQLVED NITRATE (NO3) (NO3) (NO3) (NO3) (NO3) (1.0) 1.0 1.1 .6 1.6 .3 .1 .1 .0 .1	SOLVED BORON (B) (UG/L) 140 110 120 120 150 160 160 160 170	SOL UPD SOL IDS (RESI- DE AT 180°C) (MG/L)	SOL VEI SOL IDI (SUM OF CONSTI- TUENTS (MG/L 50' 514 524 545 547 547 548 548 548 548 548 548 548 548 548 548	SOLVEY SOLLING SOLVEY SOLLING SOLVEY SOLLING SOLVEY SOLLING SOLVEY SOLVE	ED SOLUTION	ED DS HARRING (M60 ) (CA) (CA) (CA) (M60 ) (	RP- BHG, MINING (1) 165 168 172 170 172 172 172 174 179 180 181	CARTEDARY ON A TEMPORARY OF A TEMPOR	SORP- SORP- TION RATIO 4.2 4.2 4.2 4.3 4.6 4.7 4.4 4.8 4.8 4.7 5.0	FIC COND- COND- COND- UCTANCE (MICRO- MHOS) 929 928 946 939 994 994 1010 1050 1080	1UNITS) 8.1 8.4 8.2 8.0 8.2 8.0 8.1 7.9 8.1 8.4 8.3
OCT. 01-31 NOV. 01 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 JUNE 01-30 JULVE 01-31 SEP. 01-31 SEP. 01-30 WTD. AVG	SQLVED NJTRATE (NO3) (MG/L) 1.0 1.2 1.0 1.1 6 1.6 3 1 1 0 1 1 4 4 4 4 4	SOLVED BORON (8) (106/L) 140 110 120 130 120 150 160 160 170 150 150 150 150 150 150 150 150 150 15	SOL UPD SOL IDS (RESI- DE AT 180°C) (MG/L)	SOL VEI SOL IDI (SUM OF CONSTIL TUENTS (MG/L. 504 524 544 545 547 548 549 549 549 549 549 549 549 549 549 549	SOLVEY SO	ED SOLUTION	ED DS HARRING (M60 ) (CA) (CA) (CA) (M60 ) (	RP- B H H H H H H H H H H H H H H H H H H	CART- ONNATE ARD- ESS HOS/L) 38 46 39 41 35 42 41 46 50 52 53	SORP- SORP- TION RATIO 4.2 4.2 4.2 4.3 4.6 4.7 4.4 4.8 4.9 4.7	FIC COND- COND- COND- UCTANCE (MICRO- MHOS) 929 926 946 939 994 1010 1050 1080	1UNITS) 8.1 8.4 8.2 8.0 8.2 8.0 8.1 7.9 8.1 8.4 8.3 8.2
OCT. 01-31 NOV. 01-31 PEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 01-30 MAY 01-31 JUNE 01-30 JULY 01-31 AUG. 01-31 AUG. 01-31 AUG. 01-31 TEB.	SQLVED NJTRATE (NO3) (MG/L) 1.0 1.2 1.0 1.1 6.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6	SOLVED BORON (8) (106/L) 140 110 120 130 150 160 160 170 150 154	SOL UPD SOL IDS (RESI-DE AIT 180°C) (MG/L)	SOL VEI SOL IDI (SUM OF CONSTITI TUENTS (MG/L.) 500 510 524 522 549 562 578 583 595 603 593	SOLVEN SO	ED SOLUTION	ED DS HARRING (M60 ) (CA) (CA) (CA) (M60 ) (	RP- B H H H H G H H G H H H H H H H H H H H	CART- ONNATE ARD- ONNATE ARD- ARD- ARD- ARD- ARD- ARD- ARD- ARD-	SORP- SORP- TION RATIO 4.2 4.2 4.2 4.3 4.6 4.7 4.4 4.8 4.9 4.7 5.0	FIC COND- COND- COND- UCTANCE (MICRO- MHOS) 929 926 946 939 994 1010 1050 1090 1100 1080	1UNITS) 8.1 8.4 8.2 8.0 8.2 8.0 8.1 7.9 8.1 8.4 8.3 8.2 8.1

### 09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, ARIZ .-- Continued

SPECÍFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	924	926	941	939	1010	981	1010	1030	1070	1070	1090	1110
2	917		941	946	992	994	1000	1010	1070	1080	1100	1110
3	922		944		954	997	1000	1010	1070	1090	1100	1110
4	934		941	944	959	992	1000	1040	1080	1090	1100	1110
5	931		944	944	970	994	1000	1040	1080	1090	1100	1120
6	931		944	941	970	994	1000	1040	1080	1090	1100	1110
7	929		941	944	975	992	997	1050	1070	1090	1100	1110
8			941	944	978	997	1000	1040	1080	1090	1100	1120
9	927		941	944	973	994	997	1050	1070	1090	1100	1120
10	929		944		973	992	994	1050	1080	1090	1100	1120
11	922		941		973	992	994	1050	1080	1100	1100	1120
12	921		944		967	994	997	1050	1080	1100	1100	1090
13	924		944		978	989	997	1060	1080	1090	1100	1090
14	929		949		978	989	997	1040	1090	1090	1100	1090
15	924		944		978	992	1000	1050	1080	1100	1100	1080
16	922		944		975	992	1000	1050	1080	1100	1100	1080
17	934		946		975	994	1010	1050	1080	1090	1100	1080
18	929		946		973	997	1010	1050	1080	1090	1100	1080
19	929		949		975	994	1000	1060	1080	1100	1100	1080
20	929		951		978	994	1010	1060	1080	1090	1100	1080
21	931				983	994	1010	1060	1080	1080	1100	1080
22	931		954		992	992	1020	1060	1080	1100	1120	1080
23	939		946		967	997	1020	1060	1090	1090	1100	1070
24	931		949		1000	1000	1020	1060	1090	1100	1110	1070
25	931		946	944	997	1000	1030	1070	1090	1100	1100	1070
26	936		941	946	997	1010	1030	1070	1090	1110	1110	1080
27	938		954	936	997	1010	1030	1060	1090	1100	1100	1060
28	931		941	939	994	1010	1030	1070	1080	1100	1100	1060
29	934		944	941		1010	1030	1070	1090	1100	1100	1050
30	931		941	949		1010	1040	1050	1090	1100	1100	1050
31			944	949		1010		1060		1100	1110	
AVG	929		945		980	997	1010	1050	1080	1090	1100	1090

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	17.0	17.0	14.0	10.0	12.0	14.0	15.0	16.0	19.0	19.0	20.0
ž	19.0		15.0	14.0	10.0	12.0	13.0	14.0	17.0	19.0	19.0	20.0
3	19.0		15.0		10.0	12.0	13.0	14.0	16.0	19.0	19.0	20.0
4	19.0		15.0	12.0	10.0	12.0	13.0	15.0	17.0	18.0	19.0	20.0
5	19.0		15.0	10.0	11.0	12.0	13.0	14.0	18.0	18.0	19.0	19.0
6	19.0		14.0	10.0	11.0	12.0	14.0	15.0	18.0	18.0	19.0	19.0
7	19.0		14.0	10.0	L2.0	12.0	14.0	14.0	18.0	18.0	19.0	20.0
8	.,		13.0	10.0	13.0	12.0	14.0	15.0	17.0	18.0	18.0	20.0
9	20.0		14.0	10.0	12.0	13.0	14.0	15.0	17.0	19.0	18.0	20.0
10	19.0		14.0		13.0	13.0	14.0	15.0	17.0	18.0	19.0	20.0
11	18.0		13.0		12.0	13.0	14.0	15.0	17.0	18.0	19.0	20.0
12	18.0		13.0		13.0	13.0	14.0	15.0	17.0	18.0	19.0	20.0
iš	18.0	-	14.0		12.0	13.0	14.0	15.0	17.0	19.0	19.0	20,0
14	18.0		15.0		12.0	14.0	14.0	15.0	17.0	19.0	19.0	20.0
15	17.0		15.0		12.0	12.0	14.0	15.0	17.0	18.0	20.0	20.0
16	16.0		15.0		12.0	12.0	14.0	15.0	17.0	18.0	20.0	19.0
17	17.0		15.0		12.0	12.0	14.0	15.0	17.0	18.0	20.0	19.0
ìė	17.0		15.0		12.0	12.0	14.0	15.0	17.0	19.0	19.0	19.0
Į9	17.0		15.0		12.0	13.0	14.0	15.0	17.0	19.0	20.0	L9.0
20	17.0		14.0		12.0	12.0	14.0	15.0	17.0	19.0	20.0	19.0
21	17.0				12.0	12.0	14.0	15.0	17.0	19.0	20.0	19.0
22	17.0		14.0		12.0	12.0	14.0	15.0	18.0	19.0	20.0	20.0
23	17.0		14.0		12.0	14.0	14.0	15.0	18.0	19.0	19.0	19.0
24	17.0		14.0		12.0	14.0	14.0	15.0	18.0	19.0	19.0	L9.0
25	17.0		14.0	13.0	12.0	14.0	14.0	15.0	18.0	19.0	20.0	19.0
26	17.0		14.0	11.0	12.0	14.0	15.0	15.0	18.0	19.0	21.0	19.0
27	17.0		14.0	10.0	12.0	14.0	15.0	15.0	18.0	19.0	20.0	19.0
28	17.0		15.0	10.0	12.0	13.0	14.0	15.0	18.0	18.0	20.0	19.0
29	17.0		14.0	11.0		13.0	14.0	15.0	19.0	19.0	20.0	19.0
30	17.0		14.0	11.0		13.0	14.0	15.0	19.0	20.0	20.0	19.0
31			14.0	11.0		13.0		15.0		20.0	20.0	
AVG	17.5		14.5		11.5	12.5	14.0	15.0	17.5	18.5	19.5	19.5

# 09508300 WET BOTTOM CREEK NEAR CHILDS, ARIZ. (Hydrologic bench-mark station)

LOCATION.--Lat 34°09'39", long 111°41'32", in sec.36, T.9½N., R.6 E. (unsurveyed), Gila County, at gaging station, in Tonto National Forest, 1.4 miles upstream from mouth and 13 miles south of town of Childs.

DRAINAGE AREA. -- 37 sq mi, approximately.

PERIOD OF RECORD, --Chemical analyses: August 1968 to September 1970. Sediment records: August 1968 to September 1970 (partial records).

REMARKS. -- No flow Oct. 4-13, May 22 to Aug. 9.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	(HCO3)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
NOV. 12	1030	.33	33	34	12	29	1.5	212	0	5.0	11	1.9
DEC. 16	1130	.28	32	42	12	29	1.4	231	0	6.8	9.8	2.3
JAN. 13 FEB.	1100	.24	33	26	11	28	1.4	180	0	7.6	9.0	2.4
23 APR.	0945	.76	34	39	11	29	1.4	220	0	7.2	8.7	2.4
09 AUG.	0945	1.0	25	25	6.9	17	1.0	129	0	11	4.8	1.6
19	0910	.41	29	22	12	30	1.7	157	6	7.2	9.2	1.4
DATE	DIS_ SOLVED NITRATE (NO3) (MG/L)	TOTAL PHOS- PHORUS (PO4) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
NOV.	SOLVED NITRATE (NO3)	PHOS- PHORUS (PO4)	SOLVED BORON (B)	SOLVED SOLIDS (RESI- DUE AT 180°C)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	NESS (CA,MG)	CAR- BONATE HARD- NESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO-		ATURE
NOV. 12 DEC. 16	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (PO4) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
NOV. 12 DEC. 16 JAN.	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (PO4) (MG/L)	SOLVED BORON (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.2	ATURE (DEG C)
NOV. 12 DEC. 16 JAN. 13 FEB.	SOLVED NITRATE (NO3) (MG/L)	PHOS- PHORUS (PO4) (MG/L)	SOLVED BORON (B) (UG/L) 70	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 253 243	SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L) 231	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L) 131	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 364	(UNITS) 8.2 8.2	ATURE (DEG C) 18.0
NOV. 12 DEC. 16 JAN. 13 FEB.	SOLVED NITRATE (ND3) (MG/L)	PHOS- PHORUS (PO4) (MG/L) .02 .04	SOLVED BORON (B) (UG/L) 70 90	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 253 243 201	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 231 249 208	SOLVED SOLIDS (TONS PER AC-FT) .34 .33	NESS (CA,MG) (MG/L) 131 148 108	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 364 391	(UNITS) 8.2 8.2 8.2	ATURE (DEG C) 18.0 11.0 9.0

#### RADIOCHEMICAL ANALYSIS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- SOLVE GROSS ALPHA AS U-NAT (PC/L	D PEN GRO ALF 		DIS- SOLVE! GROSS ALPHA AS U-NAT (UG/L	GRO ALP A U-N	DED SOL SS GRO HA BE S A AT. CS-	VED PISS G	SUS- ENDED ROSS BETA AS S-137 PC/L)
AUG. 19	1000	3.	9	<.1	12		<.4	4.6	.4
DA	SC GR E AS	DIS- DLVED RGSS BETA SR90 A	SUS- PENDED GROSS BETA IS SR90 /Y90 (PC/L)	DIS SOLS RA-2 (RAI METHI (PC)	/ED : 226 No DON UI	DIS- SOLVED ATURAL RANIUM (U) (UG/L)	TOTAL FILT- RABLE RESIDUE (MG/L)	TOTAL NON- FILT- RABLE RESIDU	E
AUG 19	·	3.7	.4		. 05	2.2	260	<	1

### SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, AUGUST 1969 TO SEPTEMBER 1970

WATER

DATE	TIME	TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
NOV 12, 1969 DEC 16 JAN 13, 1970 FEB 23	1100 1130 1100 0945	18.0 11.0 9.0 10.0	·28 ·24	1 0 1 13	0 0 0	APR 9, 1970 AUG 19 SEP 11	0945 1000 0900	15.0 26.0 24.0	.93 .41 6.2	0 9 9	.01 .15

# 09510000 VERDE RIVER BELOW BARTLETT DAM, ARIZ. (Irrigation network station)

LOCATION. --Lat 33°49'05", long 111°37'53", in sec. 33, T.6 N., R.7 E. (unsurveyed), Maricopa County, at Bartlett Dam, 2.1 miles upstream from gaging station, 6.1 miles upstream from Camp Creek, and 18 miles east of town of Cave Creek.

DRAINMGE AREA. --6,188 sq m: (at gaging station).

PERIOD OF RECORDO--Chemical analyses: December 1950 to September 1970.

Water temperatures: December 1950 to September 1970.

ETTREMES. --1969-70:

Dissolved solids: Maximum, 378 mg/l May 1-31; minimum, 312 mg/l Oct, 1-31.

Specific conductance: Maximum daily, 660 micromhos Mar. 1; minimum daily, 431 micromhos Aug. 9.

Water temperatures: Maximum, 25.0 mg/l Sec. 18-21, 1956: minimum, 120 mg/l May 1-31, 1965.

Period of record:
Dissolved solids: Maximum, 550 mg/l Dec. 18-21, 1956; minimum, 152 mg/l May 1-31, 1965.
Hardness: Maximum, 413 mg/l Dec. 18-21, 1956; minimum, 102 mg/l May 1-31, 1965.
Specific conductance: Maximum daily, 958 micromhos Nov. 10, 1956; minimum daily, 225 micromhos May 14, 1965.
Water temperatures: Maximum, 32.0°C July 18, Aug. 14, 1951; minimum, 5.0°C Jul, 30, 1952
REMARKS.—No inflow between sampling point and gaging station except during periods of heavy local rains.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	MEAN DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT. 01-31	47	22	45	25		28		212	10	69	7.5
NOV. 01-30	350	21	43	32		32		250	6	63	19
DEC. 01-31	34	21	42	33		42		258	13	64	23
JAN. 01-31	27	20	42	33		41		262	10	63	24
FEB. 01-28	28	21	42	34		45		272	11	63	25
MAR. 01-31	212	21	41	35		37		266	6	64	23
APR. 01-30A				30	34		2.7	267	4	65	26
MAY	86	18	46	-			2.7				
01-31 JUNE	36	18	48	30		47		286	3	65	26
01-30 JULY	48	18	48	29		40		255	8	65	24
01-31 AUG.	580	18	42	27		36		226	7	61	23
01-31 SEP.	236	18	42	26		35		226	8	56	20
01-30	336	19	46	24		33		229	9	54	19
WTD. AVG		19	43	29		35		240	7	61	21
AVG. TOT. LOA	168 D	20	44	30		38		251	8	63	22
(TONS)		105	236	156		184		1310	40	330	115
DATE	DIS_ SOLVED NITRATE (NO3) (MG/L)	BIS- SOLVED BORGN (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
DATE OCT. 01-31	SOLVED NITRATE (NO3)	SOLVED BORON (B)	SOLVED SOLIDS (RESI- DUE AT 180°C)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	SOLVED SOLIDS (TONS PER	NESS (CA,MG)	CAR- BONATE HARD- NESS	AD- SORP- Tion	FIC COND- UCTANCE (MICRO-	
DATE OCT.	SOLVED NITRATE (NO3) (MG/L)	SOLVED BORGN (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIBS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- Tion Ratio	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
DATE OCT. 01-31 NOV.	SOLVED NITRATE (NO3) (MG/L)	SOLVED BORGN (B) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L) 214	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.8
DATE OCT. 01-31 NOV. 01-30 DEC.	SOLVED NITRATE (NO3) (MG/L) 1.6	SOLVED BORGN (B) (UG/L) 190	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 312	SOLVED SOLIDS (TONS PER AC-FT) .42	SOLVED SOLIDS (TONS PER DAY) 39.6	NESS (CA,MG) (MG/L) 214 239	CAR- BONATE HARD- NESS (MG/L) 24	AD- SORP- TION RATIO .8	FIC COND- UCTANCE (MICRO- MHOS) 536	(UNITS) 8.8 8.4
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN.	SOLVED NITRATE (NO3) (MG/L) 1.6 1.0	SOLVED BORON (B) (UG/L) 190 200	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 312 340	SOLVED SOLIDS (TONS PER AC-FT) .42 .46	SOLVED SOLIDS (TONS PER DAY) 39.6 321	NESS (CA,MG) (MG/L) 214 239 242	CAR- BONATE HARD- NESS (MG/L) 24 24	AD- SORP- TION RATIO .8	FIC COND- UCTANCE (MICRO- MHOS) 536 554	(UNITS) 8.8 8.4 8.5
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31	SOLVED NITRATE (NO3) (MG/L) 1.6 1.0	SOLVED BORON (B) (UG/L) 190 200 250	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 312 340 366 363	SOLVED SOLIDS (TONS PER AC-FT) .42 .46 .50	SOLVED SOLIDS (TONS PER DAY) 39.6 321 33.6 26.5	NESS (CA,MG) (MG/L) 214 239 242 242	CAR- BONATE HARD- NESS (MG/L) 24 24 10	AD- SORP- TION RATIO .8 .9 1.2	FIC COND- UCTANCE (MICRO- MHOS) 536 554 582	(UNITS) 8.8 8.4 8.5 8.6
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-38 APR. 01-31 APR. 01-30	SOLVED NITRATE (NO3) (MG/L) 1.6 1.0 .8	SOLVED BORON (B) (UG/L) 190 200 250 210	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 312 340 366 363 376	SOLVED SOLIDS (TONS PER AC-FT) .42 .46 .50 .49	SOLVED SOLIDS (TONS PER DAY) 39.6 321 33.6 26.5	NESS (CA,MG) (MG/L) 214 239 242 242 246	CAR-BONATE HARD-NESS (MG/L)  24  24  10	AD- SORP- TION RATIO .8 .9 1.2	FIC COND- UCTANCE (MICRO- MHOS) 536 554 582 578	(UNITS) 8.8 8.4 8.5 8.6 8.6
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 01-30 MAY 01-31	SOLVED NITRATE (NO3) (MG/L) 1.6 1.0 .8 .6	SOLVED BORON (B) (UG/L) 190 200 250 210 230 240	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 312 340 366 363 376 359	SOLVED SOLIDS (TONS PER AC-FT) .42 .46 .50 .49 .51	SOLVED SOLIDS (TONS PER DAY) 39.6 321 33.6 26.5 28.4	NESS (CA,MG) (MG/L) 214 239 242 242 244 246	CAR-BONATE HARD-NESS (MG/L)  24  24  10  11  4	AD- SORP- TION RATIO .8 .9 1.2 1.1	FIC COND- UCTANCE (MICRO- MHOS) 536 554 582 578 589	(UNITS) 8.8 8.4 8.5 8.6 8.6 8.3
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 01-30 MAY 01-31 JUNE 01-30	SOLVED NITRATE (NO3) (MG/L) 1.6 1.0 .8 .6 .6	SOLVED BORON (B) (UG/L) 190 200 250 210 230 240	SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 312 340 366 363 376 359	SOLVED SOLIDS (TONS PER AC-FT) .42 .46 .50 .49 .51	SOLVED SOLIDS (TONS PER DAY) 39.6 321 33.6 26.5 28.4 205	NESS (CA,NG) (MG/L) 214 239 242 242 246 246 238	CAR- BONATE HARD- NESS (MG/L) 24 24 10 11 4 18	.8 .9 1.2 1.1 1.2	FIC COND- UCTANCE (MICRO- MHOS) 536 554 582 578 589 587	(UNITS) 8.8 8.4 8.5 8.6 8.6 8.3
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 01-30 MAY 01-31 JUNE 01-30 JULY 01-31	SOLVEO NITRATE (NO3) (MG/L) 1.6 1.0 .8 .6 .6 .5 .5	SOLVED BORON (B) (UG/L) 190 200 250 210 230 240 230	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIOS (SUM OF CONSTITUENTS) (MO/L) 312 340 366 363 376 359 358 378	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIOS (170NS PER DAY) 39.6 321 33.6 26.5 28.4 205 76.4 36.7	NESS (CA,MG) (MG/L) 214 239 242 242 246 238 242	CAR- BONATE HARD- NESS (MG/L) 24 24 10 11 4 18 12 3	.8 .9 1.2 1.1 1.2 1.0	FIC COND- COND- UCTANCE (MICRO- MHOS) 536 554 582 578 589 587 583	(UNITS) 8.8 8.4 8.5 8.6 8.6 8.3 8.3
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-30 MAY 01-31 JUNE 01-30 JULY 01-31 AUG. 01-31	SOLVED NITRATE (NO3) (MG/L) 1.6 1.0 .8 .6 .6 .5 .5	SOLVED BORON (B) (U5/L) 190 200 250 210 230 240 230 220 230	SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	SOLIVED SOLIOS (SUM OF CONSTITCTUENTS) (MG/L) 312 340 366 363 376 359 358 378 359	SOLVED SOLIDS (TONS PER AC-FT) . 42 . 46 . 50 . 49 . 51 . 49 . 45 . 51 . 49	SOLVED SOLIDS (TONS PER DAY) 39.6 321 33.6 26.5 28.4 205 76.4 36.7 46.5	NESS (CA+MG) (HG/L) 214 239 242 246 246 238 242 238	CAR- BONATE HARD- NESS (MG/L) 24 24 10 11 4 18 12 3 16	.8 .9 1.2 1.1 1.2 1.0 1.3	FIC COND- COND- COND- COND- WHOS) 536 554 582 578 589 587 583 586 581	(UNITS) 8.8 8.4 8.5 9.6 8.6 8.3 8.3 8.3
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-30 MAY 01-31 JUNE 01-30 JULY 01-31	SOLVED NITRATE (NO3) (MG/L) 1.6 1.0 .8 .6 .6 .5 .5 .6	SOLVED BORON (B) (UG/L) 190 200 250 210 230 240 220 230 190	SOLVED SOLIUS (RESI-DUE AT 180°C) (MG/L)	SOLIVED SOLIOS (SUM OF CONSTITUTENTS) (MG/L) 312 340 366 359 358 378 359 326	SOLVED SOLIUS (TONS PER AC-FT) . 42 . 46 . 50 . 49 . 51 . 49 . 45 . 51 . 49 . 44	SOLVED SOLIOS (TONS PER DAY) 39.6 321 33.6 26.5 28.4 205 76.4 36.7 46.5	NESS (CA, MG) (MG/L) 214 239 242 246 238 242 238 214	CAR- BONATE HARD- NESS (MG/L) 24 24 10 11 4 18 12 3 16 17	AD- SORP- TION RATIO .8 .9 1.2 1.1 1.2 1.0 1.0	FIC COND- COND- COND- COND- WITCRO- HICRO- H	(UNITS) 8.8 8.4 8.5 8.6 8.6 8.3 8.3 8.3 8.3
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-38 MAR. 01-31 JUNE 01-30 JULY 01-31 AUG. 01-31 AUG. 01-31 AUG. 01-30 WTD. AVG	SOLVED NITRATE (NO3) (HG/L) 1.6 1.0 .8 .6 .6 .5 .5 .5 .6 1.0 .3 .2 .3	SOLVED BORON (B) (UG/L) 190 200 250 210 230 240 220 230 190 210	SOLVED SOLIUS (RESI-DUE AT 180°C) (MG/L)	SOLIVED SOLION (SUM OF CONSTITUTENTS) (MG/L) 312 340 366 363 376 359 358 378 359 326 316	SOLVED SOLIDS (TONS PER AC-FT) . 42 . 46 . 50 . 49 . 51 . 49 . 45 . 51 . 49 . 44 . 43	SOLVED SOLIOS (TONS PER DAY) 39.6 321 33.6 26.5 28.4 205 76.4 36.7 46.5 511	NESS (CA+MG) (MG/L) 214 239 242 246 238 242 238 214 210	CAR- BONATE HARD- NESS (MG/L) 24 24 10 11 4 18 12 3 16 17 11	.8 .9 1.2 1.1 1.2 1.0 1.3 1.1	FIC COND- COND- COND- COND- WICRO- HICRO- S36 554 582 578 589 587 583 586 581 530	(UNITS)  8.8  8.4  8.5  8.6  8.6  8.3  8.3  8.3  8.3  8.5  8.5
DATE OCT. 01-31 NOV. 01-30 DEC. 01-31 JAN. 01-31 FEB. 01-31 APR. 01-30 MAY 01-31 JUNE 01-30 JULY 01-31 AUG. 01-31	SOLVED NITRATE (NO3) (MG/L) 1.6 1.0 .8 .6 .6 .5 .5 .5 .6 1.0 .3 .2 .3	SOLVED BORON (B) (UG/L) 190 200 250 210 230 240 230 220 210 210 210 210 210 210 210 210 21	SOLVED SOLIUS (RESI-DUE AT 180°C) (MG/L)	SOLIVED SOLION SOLION (SUM OF CONSTITUTENTS) (MG/L) 3140 366 363 376 359 358 378 359 326 316 317	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIVED SOLIDS (TONS PER DAY) 39.6 321 33.6 26.5 28.4 205 76.4 36.7 46.5 511 201 288	NESS (CA+MO) (MG/L) 214 239 242 246 246 238 214 210 214	CAR- BONATE HARD- NESS (MG/L) 24 24 10 11 4 18 12 3 16 17 11 11 11	AD- SORP- TION RATIO .8 .9 1.2 1.1 1.2 1.0 1.3 1.1 1.1	FIC COND- COND- COND- COND- WICRO- HI	(UNITS)  8.8  8.4  8.5  8.6  8.6  8.3  8.3  8.3  8.3  8.5  8.5

A INCLUDES 0.4 MG/L DISSOLVED FLUORIDE (F).

#### 09510000 VERDE RIVER BELOW BARTLETT DAM, ARIZ, -- Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	ŠEP
1	508		558	574	574	660	568	574	580	583	544	524
2	515		562	570	587	598	560	566	578	580	532	532
3	531		563	571	588	597	556	581	577	580	533	507
4	535		579	571	587	595	556	570	591	582	528	486
5	537		574	571	573	593	520	579	590	579	526	490
6	502	562	573	580	589	591	553	577	590	576	532	516
7	506	~560	575	590	583	593	580	589	589	573	508	484
8	511	556	578	584	589	594	588	590	591	504	468	489
9	524	556	578	582	588	587	588	588	590	493	431	508
10	519	553	579	582	588	553	587	589	591	483	493	521
11	520	557	562	580	588	541	589	590	563	509	431	527
12	512	557	563	577	594	593	588	590	578	486	446	521
13	512	555	583	588	599	595	588	591	582	566	484	509
14	509	557	583	581	599	594	588	576	582	492	527	518
15	520	546	581	591	595	391	588	571	576	474	525	519
16	534	552	584	592	597	600	587	578	579	564	488	508
17	539	556	588	593	596	597	577	581	572	554	531	515
18	531	556	583	592	574	594	556	577	567	557	532	509
19	535	544	585	592	586	592	593	574	589	521	524	512
20	540	544	580	593	590	585	579	571	589	552	446	513
21	539	553	583	557	587	587	566	590	589	552	496	512
22	537	555	582	579	564	589	559	592	585	552	523	507
23	537	561	584	591	584	591	589	590	583	504	526	502
24	531	558	583	588	582	589	589	588	580	510	515	512
25		563	584	592	583	583	589	587	573	480	527	519
26	540	561	585	591	596	589	590	589	572	493	527	520
27	540	564	583	592	594	592	591	589	568	514	530	520
28	537	557	586	593	594	591	590	589	558	488	527	520
29	540	564	584	593		592	591	586	570	546	526	522
30	559	559	591	594		593	568	584	580	545	527	521
31			571	591		587		585		543	529	
AVG	528	556	578	584	587	591	577	583	580	533	509	512

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEF
1	24.0		16.0	11.0	10.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0
2	24.0		16.0	11.0	10.0	13.0	14.0	15.0	15.0	15.0	15.0	15.0
3	24.0		16.0	10.0	10.0	12.0	14.0	15.0	15.0	15.0	15.0	15.0
4	25.0		15.0	10.0	11.0	12.0	14.0	15.0	15.0	14.0	14.0	14.0
5	24.0		15.0	10.0	11.0	14.0	14.0	16.0	15.0	15.0	14.0	14.0
6	23.0	21.0	14.0	9.0	11.0	15.0	14.0	16.0	15.0	14.0	14.0	14.0
7	23.0	21.0	14.0	10.0	11.0	14.0	15.0	13.0	15.0	13.0	14.0	16.0
8	23.0	22.0	14.0	10.0	12.0	14.0	14.0	13.0	15.0	14.0	15.0	17.0
9	23.0	22.0	14.0	10.0	10.0	14.0	13.0	13.0	15.0	14.0	15.0	17.0
10	22.0	20.0	14.0	10.0	12.0	14.0	13.0	14.0	15.0	15.0	15.0	16.0
11	22.0	20.0	14.0	11.0	13.0	14.0	13.0	14.0	12.0	15.0	15.0	17.0
12	21.0	19.0	13.0	10.0	12.0	12.0	13.0	14.0	12.0	15.0	15.0	17.0
13	21.0	20.0	14.0	10.0	12.0	12.0	13.0	15.0	13.0	14.0	15.0	16.0
14	21.0	21.0	14.0	11.0	12.0	12.0	13.0	15.0	14.0	15.0	15.0	16.0
15	21.0	21.0	14.0	11.0	12.0	12.0	13.0	15.0	14.0	15.0	15.0	16.0
16	21.0	21.0	14.0	11.0	11.0	12.0	13.0	13.0	16.0	14.0	15.0	16.0
17	21.0	21.0	14.0	11.0	11.0	12.0	13.0	16.0	14.0	14.0	16.0	16.0
18		20.0	14.0	11.0	11.0	12.0	13.0	16.0	14.0	14.0	16.0	15.0
19	21.0	19.0	14.0	11.0	12.0	13.0	13.0	15.0	15.0	14.3	16.0	15.0
20	21.0	18.0	14.0	10.0	12.0	13.0		14.0	15.0	14.0	16.0	15.0
21	22.0	18.0	13.0	11.0	12.0	13.0	12.0	14.0	15.0	14.0	15.0	16.0
22	22.0	17.0	13.0	11.0	12.0	14.0	13.0	14.0	16.0	14.0	15.0	16.0
23	24.0	17.0	13.0	11.0	12.0	14.0	12.0	14.0	15.0	14.0	16.0	16.0
24	24.0	16.0	13.0	11.0	12.0	14.0	12.0	15.0	16.0	14.0	15.0	16.0
25		16.0	13.0	11.0	11.0	14.0	12.0	15.0	15.0	15.0	15.0	16.0
26	24.0	16.0	13.0	12.0	12.0	13.0	12.0	15.0	15.0	14.0	15.0	16.0
27	24.0	17.0	12.0	11.0	12.0	13.0	13.0	15.0	16.0	14.0	16.0	16.0
28		17.0	12.0	11.0	12.0	13.0	13.0	15.0	16.0	14.0	16.0	16.0
29		16.0	13.0	10.0		13.0	13.0	15.0	16.0	14.0	15.0	16.0
30		17.0	12.0	10.0		13.0	13.0	16.0	15.0	15.0	15.0	16.0
31			11.0	10.0		14.0		15.0		15.0	15.0	
AVG	22.5	19.0	13.5	10.5	11.5	13.0	13.0	14.5	15.0	14.5	15.0	15.5

# 09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, ARIZ. (Irrigation network and pesticide station)

LOCATION. -- Lat 33°13'36", long 112°46'17", in SW\{\)NE\{\} sec. 28, T. 2 S., R.5 W., Maricopa County, Enterprise Canal at gaging station at bridge on former U.S. Highway 80, 0.2 mile downstream from Gillespie Dam and 8 miles downstream from Hassayampa River.

DRAINAGE AREA, -- 49,650 sq mi.

PERIOD OF RECORD. --Chemical analyses: December 1950 to September 1970. Water temperatures: December 1950 to February 1968.

#### EXTREMES.

REMES. --1950-68:
Dissolved solids: Maximum, 7,720 mg/l Dec. 1-30, 1962; minimum, 144 mg/l Dec. 26-28, 1967.
Hardness: Maximum, 2,220 mg/l July 1-18, 1966; minimum, 80 mg/l Dec. 26-28, 1967.
Specific conductance: Maximum daily, 13,200 micromhos July 10, 11, 1966; minimum daily, 236 micromhos Dec. 28, 1967.
Water temperatures: Maximum (1950-67), 37.0°C July 8, 1958, July 22, 1959, Aug. 5, 8, 1966; minimum (1950-65), 2.0°C Jan. 1, 1951.

REMARKS.--Samples from Enterprise Canal are believed to be representative of total flow passing Gillespie Dam, including spill into Gila River and flow diverted into Gila Bend Canal. Prior to October 1987, published as 09519500 Gila River below Gilsepie Dam, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	MEAN DIS- Charge (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
OCT.									
01	18	34	330	111		1030		294	7
18	10	27	270	109		846		270	0
21	15	34	315	120		1140		300	8
NOV.									
01	17	32	270	101		780		100	0
25	19	33	280	127		970		316	0
DEC.								278	
01	20	34	245	119		937 772		278	0
12	7.0	30 29	230	124		1120		333	Ö
24 JAN.	6.7	29	325	131		1120		333	U
03	6.0	29	345	136		1190		337	0
15	19	28	375	157		1380		365	ě
FEB.	• ′		0,0	107					•
08	25	30	330	148		1240		349	Ó
MAR.									
04	14	29	285	109		942		279	0
APR.									
01	36	24	330	148		1090		328	0
02	35	17	365	165	1400		7.7	266	0
HAY									
01	16	22	315	144		1150		236	0
JUNE								250	0
01	13	31	295	130		1010		250	v
JULY 01	5.9	17	270	135		1140		163	0
24	6.3	23	255	166		882		213	ŏ
AUG.	0.3	23	200	100		502		213	v
25	16	15	270	116		1050		189	0
SEP.									•
01	17	26	265	109		924		269	0
14	134	27	170	60		542		260	0
16	61	30	250	108		903		284	0

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09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		DIS-	220			DIS-			
	DIS-	SOLVED	D18-			SOLVED			
	SOLVED	CHLO-	SOLVED FLUO-	ORGANIC	TOTAL	AMMONIA	DIS_	TOTAL	DIS-
	SULFATE	RIDE	RIDE	NITRO-	NITRO-	NITRO-	SOLVED	PHOS-	SOLVED
	(S04)	(CL)		GEN	GEN	GEN	NITRATE	PHORUS	BORON
DATE	(MG/L)		(F)	(N)	(N)	(N)	(NO3)	(PO4)	(B)
DHIE	(HU/L)	(MG/L)	(MO/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(UG/L)
OCT.									
01	1040	1500					76		3200
18	895	1250					53		2500
21	1320	1500					20		3000
NDV.									
01	840	1280			7.8		31	7.9	1900
25	976	1420					76		2100
DEC.									2100
01	844	1260					82		2300
12	724	1130					66		2400
24	1100	1550		-64	14	.00	60	2.9	3200
JAN.									3200
03	1130	1660					66		3000
15	1370	1880		.68	15	.00	62	.23	3900
FEB.							02	.23	3700
08	1180	1700					68		3400
HAR.							00		3400
04	960	1390		.62	5.8	.00	23	2.6	3100
APR.					,,,		23	2.0	3100
01	1160	1620					57		3100
02	1450	2000	2.4	- 40	9.8	.00	42	1.6	3900
HAY				• • • •	,,,	.00	72	1.0	3700
01	1240	1670		.74	12	.00	50	1.6	3400
JUNE				•,, •		.00	30	1.0	3400
01	1120	1450		.91	13	.00	54	2.1	3400
JULY				• * *	13	.00	34	2.1	3400
01	1210	1640		.49	3.8	.00	15	.75	
24	992	1410				.00	50		3300
AUG.							50		2700
25	1090	1500					••		
SEP.		- 000					40		3300
01	900	1360							
14	472	795					53		2600
16	700	1290					28		1600
	,00	1470					52		2400

	DIS-	DIS-						
	SOLVED	SOLVED	DIS-		NON-	SODIUM	SPECI- FIC	
	SOLIDS	SOLIDS	SOLVED		CAR-	AD-		
	(RESI-	(SUM OF	SOLIDS	HARD-	BONATE	SORP-	COND-	PH
	DUE AT	CONSTI-	(TONS	NESS	HARD-	TION	UCTANCE	PH
	180°C)	TUENTS)	PER	(CA, MG)	NESS	RATIO	(MICRO-	
DATE	(MG/L)	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)
OCT.								
01		4270	5.81	1280	1030	12	6 <b>5</b> 30	8.3
18		3590	4.88	1120	898	11	5690	8.0
21		4610	6.27	1280	1020	14	6580	8.3
NOV.								
01		3400	4.62	1090	1010	10	5640	7.5
25		4040	5.49	1220	962	12	6290	7.8
DEC.								
01		3660	4.98	1100	872	12	5690	7.8
12		3210	4.37	1080	872	10	5100	7.5
24		4490	6.11	1350	1080	13	6930	8.0
JAN.								
03		4720	6.42	1420	1140	14	7200	8.1
15		5440	7.40	1580	1270	15	8160	8.3
FEB.								
08		4870	6.62	1430	1140	14	7240	8.1
MAR.								
04		3880	5.28	1160	932	12	6060	8.0
APR.								
01		4590	6.24	1430	1160	13	7090	7.9
02	5660	5590	7.70	1590	1370	15	8440	7.9
MAY								
01		4710	6.41	1380	1190	13	7290	7.9
<b>JUNE</b>								
01		4220	5.74	1270	1060	12	6520	7.9
JULY								7.7
01		4510	6.13	1230	1100	14	7020	
24		3890	5.29	1320	1150	11	6200	7.8
AUG.								
25		4180	5.68	1150	996	13	6530	7.9
SEP.							E00-	
01		3770	5.13	1110	890		5880	8.0 7.9
14		2220	3.02	670	457	9.1	3480	
16		3650	4.96	1070	838	12	5620	8.0

GILA RIVER BASIN

09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, ARIZ.--Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	TIME	ALDRIN	CHLOR-	מממ	DDE	DDT	DI- Eldrin
DATE	IINE	(UG/L)	DANE (UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
OCT.							
13 DEC.	0915	.00		.01	.01	.01	.01
18 JAN.	1205	.00		.04	.02	.02	.00
22 FEB.	1030	.00		.02	.04	.02	.00
17 APR.	1215			.02	.04	.01	.00
01 MAY	1200	.00		.02	.05	.01	.00
04 JUNE	1345	.00	.0	.02	.03	.01	.00
03 JULY	1140	.00	.0	.01	.04	.01	.00
02	1530	.00	.0	.01	.02	.00	.01
30	1500	.00	.0	.01	.04	.00	.00
SEP. 01	1200	.00	.0	.00	.02	.00	.00
	ENDRIN	HEPTA- CHLOR	HEPTA- CHLOR EPOXIDE	LINDANE	2,4-D	2,4,5-T	SILVEX
DATE	ENDRIN		CHLOR EPOXIDE		2,4-D (UG/L)	2+4+5-T (UG/L)	
DATE		CHLOR	CHLOR	LINDANE (UG/L)			SILVEX (UG/L)
		CHLOR	CHLOR EPOXIDE				
OCT.		CHLOR	CHLOR EPOXIDE				
0CT. 13 DEC. 18	(UG/L)	CHLOR (UG/L)	CHLOR EPOXIDE (UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
OCT. 13 DEC. 18 JAN. 22	(UG/L)	CHLOR (UG/L)	CHLOR EPOXIDE (UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
OCT. 13 DEC. 18 JAN. 22 FEB. 17	(UG/L)	.00	CHLOR EPOXIDE (UG/L)	(UG/L) .02 .02	(UG/L) .00 .03	.01	.00
OCT. 13 DEC. 18 JAN. 22 FEB.	.01 .00	.00 .00	.00 .00	.02 .02 .01	.00 .03	.01 .00	.00 .00
OCT. 13 DEC. 18 JAN. 22 FEB. 17 APR.	.01 .00 .00	.00 .00 .00	CHLOR EPOXIDE (UG/L) .00 .00 .00	.02 .02 .01	.00 .03 .00	.01 .00 .00	.00 .00 .00
OCT. 13 DEC. 18 JAN. 22 FEB. 17 APR. 01 MAY	.01 .00 .00	.00 .00 .00 .00	.00 .00 .00	.02 .02 .01 .02	.00 .03 .00	.01 .00 .00	.00 .00 .00
OCT. 13 DEC. 18 JAN. 22 FEB. 17 APR. 01 MAY 04 JUNE 03 JUNE	.01 .00 .00 .01 .00	.00 .00 .00 .00 .00	.00 .00 .00 .00	.02 .02 .01 .02 .01 .00	.00 .03 .00 .00  .00	.01 .00 .00 .00 .00	.00 .00 .00 .00 .00
OCT. 13 DEC. 18 JAN. 22 FEB. 17 APR. 01 MAY 04 JUNE 03 JULY 02	.01 .00 .00 .01 .00	.00 .00 .00 .00 .00	.00 .00 .00 .00 .00 .00	.02 .02 .01 .02 .01	.00 .03 .00 .00 	.01 .00 .00 .00 	.00 .00 .00 .00 .00
OCT. 13 DEC. 18 JAN. 22 FEB. 17 APR. 01 MAY 04 JUNE 03 JUNE	.01 .00 .00 .01 .00 .00	.00 .00 .00 .00 .00 .00	CHLOR EPOXIDE (UG/L) .00 .00 .00 .00 .00 .00 .00	.02 .02 .01 .02 .01 .00	.00 .03 .00 .00  .00	.01 .00 .00 .00 .00	.00 .00 .00 .00 .00

### 09520700 GILA RIVER NEAR MOUTH, NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'45", long 114°33'09", in SW4SE4 sec.19, T.8 S., R.22 W., Yuma County, 0.5 mile upstream from mouth and 5 miles east of Yuma.

DRAINAGE AREA. -- 58,000 sq mi, approximately.

PERIOD OF RECORD .-- Chemical analyses: October 1968 to September 1970.

REMARKS. --- Unpublished chemical analyses for water years 1962-68 available in district office, Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- SOLVED SILICA (SIO2) (MO/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)
D	1110727	(110/2)	(110, 2)	(110/2/	(110/2/	(110, 2,	(110/2/	1110727
OCT.								
15	22	156	83	520	312	620	680	
21		145	63		296		550	
DEC.								
17	20	162	70	487	280	500	708	
JAN.								
16	24	186	82	573	308	520	888	
30		150	62		292		565	
FEB.	24		65					
16 MAR.	24	162	65	465	286	495	660	2150
20	24	178	87	555	308	505	872	2540
APR.	24	170	٥,	333	300	303	6/2	2340
08	23	230	108	647	348	540	1120	3180
22	23	202	82	535	308	500	872	2610
MAY								
06	22	154	67	436	262	495	622	2090
JUNE								
03	22	151	64	470	306	535	606	2140
17	21	173	73	515	288	505	772	2370
JULY								
01	20	182	79	548	296	560	813	2540
15	21	186	79	582	300	570	862	2720
30	21	186	79	555	304	510	862	2710
AUG.								
12	18	161	67	462	276	440	706	2220
26 SEP.	21	157	64	468	296	520	630	2160
09	22	140	55	421	272	E10	E#0	1070
24	21	149 161	60 55	421 463	272 292	510 550	540 600	1970
27	21	101	60	703	242	550	600	2130

	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (TONS PER	HARD- NESS (CA, HG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO-	РΗ
DATE	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)
OCT.							
15	2240	3.05	730	474	8.4	3660	8.0
21			620	378	-11	3170	8.1
DEC.							
17	2090	2.84	690	460	8.1	3380	8.0
JAN.							
16	2430	3,30	800	548	8,8	4020	8.0
30			630	390		3220	7.9
FEB.							
16	2010	2.92	670	436	7.8	3410	7.9
MAR.							
20	2380	3.45	800	548	8,5	4030	8.0
APR.							
08	2840	4.32	1020	734	8.8	4960	7.9
22	2370	3.55	840	588	8.0	4140	7.9
MAY							
06	1930	2.84	660	445	7.4	3260	8,1
JUNE							
03	2000	2,91	640	389	8.1	3330	8.1
17	2200	3.22	730	494	8.3	3760	8.0
JULY							
01	2350	3.45	780	538	8.5	3960	7.9
15	2450	3.70	790	544	9.0	4140	8.0
30	2360	3.69	790	540	8.6	4170	7.9
AUG.							
12	1990	3.02	675	448	7.7	3490	8.0
26	2010	2.94	655	412	8.0	3400	8.2
SEP.						2000	
09	1830	2.68	600	377	7.5	3080	8.2
24	2000	2.90	650	410	7.9	3290	8.1

#### COLORADO RIVER MAIN STEM

# 09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.

LOCATION. --Lat 32°43'07", long 114°43'05", in NE\se\ sec.21, T.8 S., R.24 #., Gila and Salt River meridian, Yuma County, Ariz., at northerly international boundary, 0.5 mile east of Andrade, 1.1 miles upstream from Morelos Dam, 1.1 miles downstream from Rockwood Gate, 20.7 miles upstream from southerly international boundary, and 21 miles downstream from Laguna Dam.
DRAINAGE AREA.--243,000 sq mi, approximately.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED -CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)
06	12	105	43	170	200	380	178	
07	12	106	40	175	200	380	178	
13 20	12 13	106 108	40 44	177 162	192 184	390 380	178 182	
27	11	102	43	170	188	380	178	
NOV.	13	111	40	189	212	390	192	
10	14	97	38	174	188	360	178	
12	9.0	103	40	169	188	390	162	1060
17 24	12 14	110 124	43 46	197 237	216 248	400 425	202 262	1210
DEC.								
01 08	13 13	116 111	46 40	208 210	212 208	415 410	232 212	1260 1170
15	12	121	46	221	200	425	258	1170
22	12	118	45	241	208	425	278	1320
29 JAN.	12	116	46	233	208	430	262	1300
05	12	114	45	230	196	415	268	1290
12	1.1	116	46	227	200	420	265	1270
19 26	13 12	118 114	45 43	243	21 <b>4</b> 220	445	262	1340 1200
FEB.	12	114	43	209	220	415	215	1200
02	12	114	43	210	220	420	212	1200
09 16	12 11	113 118	41 43	196 226	216 220	400 425	200 240	1180 1270
24	11	108	41	202	198	405	210	1150
MAR.	4.0							
02	10	105 95	40 34	161	190 168	375	162 128	1010
09	1 3	110	43	188	206	390	202	1150
16 23	13 12	113 113	43 41	217 204	204	420	232	1260
30	10	114	40	208	196 198	405 410	222 222	1150 1160
APR.								
06 13	9.0	110 114	45 43	203 218	194 196	405 420	228 238	1190 1210
20	11	115	42	208	196	405	235	1230
27 May	11	123	45	246	206	440	282	1340
04	11	114	44	198	204	430	200	1200
11	12	122	43	221	220	435	232	1280
18 25	12 12	118 121	48 42	209	208	430	232'	1270
JUNE	12	121	42	224	214	435	237	1260
01	12	119	46	220	218	440	232	1290
08 15	13 12	116 118	45 45	230	216	445	238	1260
22	11	115	48	241 237	208 208	445 435	262 268	1330 1310
29	12	116	46	238	208	435	265	1320
JULY 06	10	119	45	248	204	450	272	1340
13	12	113	47	250	204	440	272	1340
20	12	113	49	251	202	445	285	1360
27 AUG.	13	123	45	258	210	455	288	1370
03	14	121	46	264	212	450	300	1420
10	12	122	40	239	204	440	258	1260
17 24	12 13	113 116	4 1 4 1	220 226	202 204	425 425	228 242	1230 1270
31	11	118	44	236	214	425	242	1270
SEP.	13	440	40					
08 14	13	119 117	40 42	228 224	212 212	432 435	235 230	1260 1260
21	1 4	111	40	198	212	405	195	1060
28	15	114	43	210	220	425	208	1200

# 09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.--Continued

PERIOD OF RECORD, --Chemical analyses: October 1968 to September 1970.
EXTREMES.--1969-70:
Specific conductance: Maximum, 2,230 micromhos Dec. 9; minimum, 1,360 micromhos Mar. 4.
REMARKS.--Unpublished chemical analyses for water years 1962-68 available in district office, Tucson Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	DIS-						_
	SOLVED	DIS-		NON-	SODIUM	SPECI-	
	SOLIDS	SOLVED		CAR-	AB-	FIC	
	(SUM OF	SOLIDS	HARD-	BONATE	SORP-	COND-	
	CONSTI-	(TONS	NESS	HARD-	TION	UCTANCE	PH
	TUENTS)	PER	(CA,MG)	NESS	RATIO	(MICRO-	
DATE	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)
OCT.							
06	988	1.34	440	276	3.5	1600	8.2
07	991 999	1.35	430 430	266	3.7 3.7	1570 1590	8.2 8.1
13 20	981	1.36	450 450	272 2 <b>99</b>	3.7	1630	8.2
27	978	1.33	430	279	3.6	1600	8,1
NOV.	770	1.00	450	270	0.0	1000	0.1
03	1040	1.41	440	266	3.9	1650	8.1
10	955	1.30	400	246	3.8	1510	8,1
12	967	1.44	420	266	3.6	1520	8.2
17	1070	1.65	450	273	4.0	1720	8.1
24	1230	1.67	500	296	4.6	2010	8.1
DEC.							
01,	1140	1.71	480	306	4.1	1850	8.1
08	1100	1.59	440	270	4,3	1730	8.1
15	1180	1.60	490	326	4.3	1900	8.2
22	1220	1.80	480	310	4.8	1960	8.2
29 JAN.	1200	1.77	480	310	4.6	1910	8.1
05	1180	1.75	470	320	4.6	1910	8.0
12,	1180	1.73	480	316	4.5	1900	8.1
19	1230	1.82	480	304	4.8	1950	8.1
26	1120	1.63	460	280	2.0	1780	8.0
FEB.			,,,,		2.0		
02	1120	1.63	460	280	4.3	1780	8.1
09	1070	1,60	450	273	4.0	1730	8.0
16	1170	1.73	470	290	4.5	1900	8.1
24	1080	1.56	440	278	4.2	1750	8.1
MAR.							
02	948	1.37	425	269	3.4	1540	8.1
04		. =-	375	237		1360	8.0
09	1050	1.56	450	281	3.8	1710 1840	8.1 8.1
16 23	1140 1100	1.71	460 450	292 290	4.4	1760	8.1
30	1100	1.58	450	288	4.3	1760	8.1
APR.	1100	1.00	430	200	4.0	1,00	
06.,.	1100	1.62	460	301	4.1	1800	8.2
13	1140	1.65	460	300	4.4	1850	8.2
20	1110	1.67	460	300	4.2	1870	8.1
27	1250	1.82	302	133	2.3	2020	8.1
MAY							
04	1100	1.63	465	298	4.0	1800	8.1
11	1180	1.74	480	300	4.4	1900	8.1
18.,,	1150	1.73	490	320	4 - 1	1890	8.2
25	1180	1.71	475	300	4.5	1900	8.1
JUNE							
01	1180 1200	1 75 1.71	485 475	306 298	4.3 4.6	1910 1910	8.2 8.1
08 15	1230		4/3 480	310	4.8	1910	8.2
22	1220	1.81 1.78	485	314	4.0	2000	8.1
29	1220	1.80	480	310	4.7	2000	8.1
JULY			400	210			
06.,.	1250	1.82	480	312	4.9	2030	8.1
13	1240	1.82	475	306	5.0	2020	8.2
20	1260	1.85	485	320	5.0	2060	8.2
27	1290	1.86	490	318	5.1	2080	8.1
AUG,							
03	1300	1.93	490	316	5.2	2120	8.2
10	1210	1.71	470	302	4.8	1960	8.1
17	1140	1.67	450	284	4.5	1860	8.1
24	1160	1.73	460	292	4.6	1890 1930	8.1
31 SEP.	1210	1.73	475	300	4.7	1430	8.1
08.,.	1170	1.71	460	286	.6	1910	8.1
14	1170	1.71	465	291	4.5	1910	8.2
21	1070	1.44	440	266	4.1	1700	8.2
28	1120	1.63	460	280	4.3	1790	8.2

#### COLORADO RIVER MAIN STEM

# 09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

BAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1550	1620	1850	1690	1770	1660	1760	1740	1910	2030	1890	1920
2	1550	1600	1860	1970	1780	1540	1760	1760	1910	2030	1880	1880
3	1550	1650	1800	1890	1790	1400	1820	1780	1900	1950	2120	1880
4	1560	1640	1820	1860	1730	1360	1710	1800	1950	1960	2070	1910
5	1570	1630	1860	1910	1740	1560	1730	1840	1900	1960	2050	1800
6	1600	1560	1800	1850	1710	1630	1800	1860	1870	2030	2040	1810
7	1570	1580	1770	1860	1710	1830	1790	1820	1850	2020	1990	1840
8	1580	1560	1730	1850	1760	1660	1840	1830	1910	2020	1710	1910
9	1550	1550	2230	1890	1730	1710	1830	1820	1860	2030	1770	1930
10	1560	1510	2160	1890	1720	1940	1850	1840	1910	2000	1960	1890
11	1550	1620	2040	1880	1580	1920	1750	1900	1910	1910	1930	1880
12	1550	1520	1930	1900	1470	1920	1820	1840	2040	1930	1920	1740
13	1590	1580	1890	1890	1570	1870	1850	1900	1870	2020	1890	1880
14	1520	1630	1930	1890	1640	1760	1870	1840	1880	2030	1880	1910
15	1520	1630	1900	1860	1650	1860	1850	1930	1990	2000	1680	1820
16	1550	1590	1890	1870	1900	1840	1820	1800	1990	2020	1740	1700
17	1650	1720	1880	1890	1930	1840	1850	1800	2000	2010	1860	1720
18	1600	1860	1930	1870	1870	1820	1760	1890	2020	1910	1890	1740
19	1570	1870	1920	1950	1830	1760	1790	1890	2020	1870	1850	1730
20	1630	1960	1910	1900	1810	1750	1870	1890	1850	2060	1810	1710
21	1600	1930	1950	1820	1840	1720	1860	1870	1890	2050	1830	1700
22	1670	1930	1960	1800	1790	1720	1870	1860	2000	2050	1720	1740
23	1640	2070	1960	1790	1730	1760	1870	1830	1980	1970	1750	1760
24	1590	2010	1950	1770	1750	1740	1930	1840	1990	1990	1890	1770
25	1570	1910	2020	1760	1780	1740	1860	1900	1960	1850	1850	1770
26	1580	1990	1960	1780	1750	1740	1910	1910	1990	2000	1860	1760
27	1600	1950	2090	1780	1760	1740	2020	1890	1940	2080	1880	1770
28	1610	1940	1960	1780	1710	1650	1970	1800	1850	2050	1830	1790
29	1610	1910	1910	1740		1510	1770	1870	2000	2090	1640	1810
30	1610	1850	1930	1730		1760	1770	1880	1990	2090	1780	1780
31	1580		1930	1740		1760		1870		2010	1930	
AVG	1580	1750	1930	1840	1740	1720	1830	1850	1940	2000	1870	1810

### COLORADO RIVER MAIN STEM

## 09522200 COLORADO RIVER AT SOUTHERLY INTERNATIONAL BOUNDARY, NEAR SAN LUIS, ARIZ.

LOCATION.--Lat 32°29'48", long 114°48'48", at gaging station in Mexico, 0.2 mile upstream from southerly international boundary, 2 miles west of San Luis, Ariz., 19.4 miles downstream from Morelos Dam, and 20.5 miles downstream from northerly international boundary.

DRAINAGE AREA. -- 243,000 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: October 1968 to September 1970.

DIS-

REMARKS. -- Unpublished chemical analyses for water years 1962-68 available in district office, Tucson Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- BUE AT 180°C) (MG/L)
OCT.								
30		250	121		324		1560	
NOV.								
12	19	202	94	739	304	750	1040	
25		270	128		350		1590	
DEC.								
30	26	274	121	1150	346	1010	1660	
JAN.								
29	21	258	130	1030	324	1000	1500	4320
FEB.								
27	21	202	96	704	312	830	930	3140
MAR. 31		182	84	559	276	715	741	2620
APR.	16	182	84	559	2/6	/15	/41	2020
30	21	230	104	772	302	900	1060	3440
MAY		200	104		002	,,,,		3.40
28	20	194	96	691	278	840	908	3140
JUNE								
30	20	214	96	806	284	850	1110	3480
AUG.				-				
04	19	202	87	676	250	770	938	3030
28	16	167	68	477	236	640	620	2260
SEP.								
30	24	244	95	836	340	895	1140	3930

	SOLVED	DIS- SOLVED		NDN- CAR-	SODIUM AD-	SPECI- FIC	
	(SUM OF	SOLIDS	HARD-	BONATE	SORP-	COND-	
	CONSTI-	(TONS	NESS	HARD-	TION	UCTANCE	₽H
	TUENTS)	PER	(CA,MG)	NESS	RATIO	(MICRO-	
DATE	(MG/L)	AC~FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)
вст.							
30			1120	854		6770	8.0
NGV.							
12	3000	4.08	890	640	11	4830	8.1
25			1200	913		6840	7.9
DEC.							
30	4410	6.00	1180	896	15	6980	7.8
JAN.							
29	4100	5.88	1180	914	13	6770	7.7
FEB.							
27	2940	4.27	900	644	10	4900	7.8
MAR.							
31	2440	3.56	800	574	8.6	3990	8.0
APR.							
30	3240	4.68	1000	752	11	5210	7.9
MAY							
28	2890	4.27	880	652	10	4760	7.8
JUNE							
30	3240	4.73	930	697	12	5260	7.9
AUG.							
04	2820	4.12	860	655	10	4610	8.0
28	2110	3.07	695	502	7.9	3450	8.0
SEP.							
30	3400	4.94	1000	721	12	5560	7.9

### 09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, ARIZ. -CALIF.

LOCATION.--Lat 32°52'34", long 114°27'18", in SEISWI sec. 30, T.6 S., R.21 W., Gila and Salt River meridian, Yuma County, Ariz., temperature recorder at gaging station 0.6 mile downstream from intake at east end of Imperial

PERIOD OF RECORD, --Chemical analyses: October 1967 to September 1970 (partial records). Water temperatures: January 1956 to September 1970.

### EXTREMES. -- 1969-70:

Water temperatures: Maximum, 33.0°C Aug. 29-31; minimum, 10.0°C Jan. 29 to Feb. 6.

Reriod of record: Water temperatures: Maximum, 33.0°C Aug. 29-31, 1970; minimum, 7.0°C Jan. 13-17, 1964.

REMARKS, -- Temperature probe above water surface Nov. 21-27. Unpublished chemical analyses for water years 1965-67 available in district office, Tucson, Ariz.

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
OCT. 22 JAN.	0950	1160		95	40	π-	172		138
14 JULY	1100	826	9.0	95	37	156	172	385	133
15			8.0	91	37	139	160	370	118
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CGNSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT. 22 JAN.				400	259		1390	8.1	18.0
14 JULY	954	901	1.30	390	249	3.4	1380	8.1	11.0
15	898	843	1.22	380	249	3.1	1350	8.1	

## 09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, ARIZ.-CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	rc:	TCBER	NCVE	MBER	NAIEK, WA	EMBER	I ABGULDU	UARY	FFR	RUARY	M	ARCH
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	HAX	MIN	MAX	MIN
1 2	27.0 27.0	27.0 27.0	19.0 19.0	19.0 19.0	14.0 15.0	14.0 14.0	12.0 12.0	12.0 12.0	10.0 10.0	10.0 10.0	14.0 14.0	14.0 14.0
3	27.0 26.0	26.0 23.0	19.0 19.0	19.0 19.0	16.0 16.0	15.0 16.0	12.0 12.0	12.0 12.0	10.0 11.0	10.0	14.0 14.0	14.0 14.0
5	23.0	22.0	19.0	19.0	16.0	16.0	12.0	12.0	11.0	10.0	14.0	14.0
6	22.0	21.0	19.0	19.0	16.0	15.0	12.0	12.0	11.0	10.0	14.0	14.0
7 8	21.0	21.0 21.0	19.0	19.0 19.0	15.0 14.0	15.0 13.0	12.0 12.0	12.0 12.0	12.0 12.0	11.0 12.0	15.0 15.0	14.0 15.0
9	22.0	21.0	19.0	19.0	14.0	13.0	12.0	11.0	12.0	12.0	16.0	15.0 15.0
10	23.0	22.0		18.0	13.0	13.0	12+0	11.0	12.0	12.0	16.0	
11 12	23.0	21.0 21.0	19.0	18.0 19.0	13.0 13.0	12.0 12.0	11.0 11.0	11.0 11.0	13.0 14.0	12.0 13.0	15.0 15.0	14.0 15.0
13	21.0	20.0	20.0	19.0	12.0	12.0	12.0	11.0	14.0	14.0	16.0	15.0 15.0
14 15	20.0 21.0	20.0 20.0	19.0 19.0	19.0 19.0	12.0 12.0	12.0 12.0	12.0 12.0	12.0 11.0	14.0 14.0	14.0 14.0	16.0 17.0	16.0
16	22.0	21.0	19.0	18.0	12.0	12.0	12.0	11.0	15.0	14.0	17.0	16.0
17 18	22.0 22.0	21.0 20.0	19.0 18.0	18.0 17.0	12.0 12.0	12.0 11.0	13.0 13.0	12.0 13.0	14.0 14.0	14.0 13.0	16.0 16.0	16.0 15.0
19	21.0	20.0	17.0	15.0	12.0	12.0	13.0	13.0	13.0	12.0	16.0	15.0
20	20.0	19.0	15.9	15.0	12.0	12.0	13.0	13.0	12.0	11.0	15.0	15.0
21 22	20.0 19.0	19.0 18.0			12.0 13.0	12.0 12.0	13.0 13.0	13.0 13.0	12.0	11.0 11.0	15.0 16.0	15.0 15.0
23	19.0	19.0			13.0	13.0	13.0	12.0	12.0	12.0	16.0	15.0
24 25	20.0 21.0	19.0 20.0			13.0 12.0	12.0 11.0	13.0 13.0	12.0 12.0	12.0 12.0	12.0 12.0	17.0 17.0	16.0 17.0
26	21.0	20.0			15.0	12.0	13.0	12.0	13.0	12.0	17.0	17.0
27 28	21.0	21.0	14.0	14.0	15.0 15.0	15.0 13.0	13.0 12.0	12.0 12.0	13.0 14.0	13.0 13.0	17.0	16.0 15.0
29	21.0	21.0	14.0	14.0	13.0	12.0	12.0	10.0			16.0	16.0
30 31	20.0 20.0	19.0	14.0	14.0	12.0 12.0	12.0	10.0	10.0			16.0 16.0	16.0 16.0
MCNTH	27.0	18.0			16.0	11:0	13.0	10.0	15.0	10.0	17.0	14.0
MCMIN	21.0	10.0			10.0	11.0	13.0	10.0	19.0	10.0	17.0	14.0
	A	PRIL		4AY	ال	UNE	ال	JLY	AU	GUST	SEP	TEMBER
DAY	A MAX	PRIL MIN	MAX	MIN	IL XAM	UNE M I N	IL XAM	JLY MIN	MAX	GUST MIN	SEP'	TEMBER M I N
1	MAX 16.0	MIN 16.0	MAX 19.0	MIN 18.0	MAX 27.0	MIN 26.0	MAX 28.0	MIN 27.0	MAX 30.0	MIN C.95	MAX 32.0	MIN 32.0
1 2 3	MAX 16.0 16.0 17.0	MIN 16.0 16.0 16.0	MAX 19.0 20.0 21.0	MIN 18.0 19.0 20.6	MAX 27.0 27.0 27.0	MIN 26.0 26.0 27.0	MAX 28.0 28.0 29.0	MIN 27.0 27.0 28.0	MAX 30.0 31.0 31.0	MIN 29.3 30.0 29.0	MAX 32.0 32.0 31.0	MIN 32.0 31.0 31.0
1 2	MAX 16-0 16-0	MIN 16.0 16.0 16.0	MAX 19.0 20.0 21.0 21.0	MIN 18.0 19.0 20.6 20.0	MAX 27.0 27.0 27.0 27.0	MIN 26.0 26.0 27.0 27.0	MAX 28.0 28.0 29.0 30.0	MIN 27.0 27.0	MAX 30.0 31.0	MIN 29.0 0.06	MAX 32.0 32.0	MIN 32.0 31.0
1 2 3 4 5	MAX 16-0 16-0 17-0 17-0	MIN 16.0 16.0 16.0 16.0	MAX 19.0 20.0 21.0 21.0 22.0	MIN 18.0 19.0 20.0 20.0 21.0	MAX 27.C 27.0 27.0 27.0 27.0	MIN 26.0 26.0 27.0 27.0 27.0	MAX 28.0 28.0 29.0 30.0 31.0	MIN 27.0 27.0 28.0 29.0 30.0	MAX 30.0 31.0 31.0 29.0 30.0	MIN 29.3 30.0 29.0 29.0 29.0	MAX 32.0 32.0 31.0 31.0	MIN 32.0 31.0 31.0 31.0 30.0
1 2 3 4 5	MAX 16-0 16-0 17-0 17-0 17-0	MIN 16.0 16.0 16.0 16.0 16.0	MAX 19.0 20.0 21.0 21.0 22.0 22.0	MIN 18.0 19.0 20.0 20.0 21.0	MAX 27-C 27-0 27-0 27-0 27-0 27-0	MIN 26.0 26.0 27.0 27.0 27.0 27.0	MAX 28.0 28.0 29.0 30.0 31.0	MIN 27.0 27.0 28.0 29.0 30.0	MAX 30.0 31.0 31.0 29.0 30.0	MIN 29.2 30.0 29.0 29.0 29.0 29.0	MAX 32.0 32.0 31.0 31.0 31.0	MIN 32.0 31.0 31.0 31.0 30.0
1 2 3 4 5 6 7 8	MAX 16-0 16-0 17-0 17-0 17-0 17-0 18-0	MIN 16.0 16.0 16.0 16.0 16.0 17.0 17.0	MAX 19.0 20.0 21.0 21.0 22.0 22.0	MIN 18.0 19.0 20.0 20.0 21.0 21.0 21.0	MAX 27.C 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0	MAX 28.0 28.0 29.0 30.0 31.0 31.0 31.0	MIN 27.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0	MAX 30.0 31.0 31.0 29.0 30.0	MIN 29.2 30.0 29.0 29.0 29.0 29.0 31.0	MAX 32.0 32.0 31.0 31.0 31.0 31.0	MIN 32.0 31.0 31.0 31.0 30.0 28.0 27.0 28.0
1 2 3 4 5	MAX 16-0 16-0 17-0 17-0 17-0	MIN 16.0 16.0 16.0 16.0 16.0	MAX 19.0 20.0 21.0 21.0 22.0 22.0	MIN 18.0 19.0 20.0 20.0 21.0	MAX 27-C 27-0 27-0 27-0 27-0 27-0	MIN 26.0 26.0 27.0 27.0 27.0 27.0	MAX 28.0 28.0 29.0 30.0 31.0	MIN 27.0 27.0 28.0 29.0 30.0	MAX 30.0 31.0 31.0 29.0 30.0	MIN 29.2 30.0 29.0 29.0 29.0 29.0	MAX 32.0 32.0 31.0 31.0 31.0	MIN 32.0 31.0 31.0 31.0 30.0
1 2 3 4 5 6 7 8 9 10	MAX 16-0 16-0 17-0 17-0 17-0 17-0 18-0 18-0 20-0	MIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 18.0	MAX 19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0	MIN  18.0 19.0 20.6 20.6 21.0 21.0 21.0 21.0 22.0 22.0	MAX 27.C 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN  26.0  26.0  27.0  27.0  27.0  27.0  27.0  27.0  27.0  27.0  26.0  25.0	MAX 28.0 28.0 29.0 30.0 31.0 31.0 31.0 32.0 29.0 29.0	MIN 27.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0 29.0 29.0	MAX 30.0 31.0 29.0 30.0 31.0 32.0 32.0 32.0 32.0 32.0	MIN 29.0 30.0 29.0 29.0 29.0 31.0 31.0 31.0	MAX 32.0 32.0 31.0 31.0 31.0 31.0 31.0 31.0	MIN 32.0 31.0 31.0 31.0 30.0 28.0 28.0 28.0 29.0
1 2 3 4 5 6 7 8 9 10	MAX 16-0 17-0 17-0 17-0 17-0 18-0 18-0 20-0 21-0	MIN 16.0 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 19.0	MAX 19.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0	MIN 18.0 19.0 20.0 20.0 21.0 21.0 21.0 22.0 22.0 22	MAX 27.C 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 25.0	MAX 28.0 29.0 30.0 31.0 31.0 31.0 30.0 29.0 29.0	MIN 27.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0 28.0 29.0 29.0	MAX 30.0 31.0 31.0 29.0 30.0 31.0 32.0 32.0 32.0 32.0 31.0 31.0	MIN 29.2 30.0 29.0 29.0 29.0 31.0 31.0 31.0 31.0	MAX 32.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	MIN 32.0 31.0 31.0 31.0 30.0 28.0 27.0 28.0 29.0
1 2 3 4 5 6 7 8 9 10 11 12 13	MAX 16-0 16-0 17-0 17-0 17-0 17-0 18-0 18-0 20-0 21-0 20-0	MIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 18.0	MAX 19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 20.0 20.0 21.0 21.0 21.0 22.0 22.0 22	MAX 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 25.0 24.0 24.0	MAX 28.0 28.0 29.0 30.0 31.0 31.0 31.0 30.0 29.0 29.0 30.0 30.0	MIN 27.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0	MAX 30.0 31.0 31.0 29.0 30.0 31.0 32.0 32.0 32.0 31.0 31.0 31.0 31.0 31.0	MIN 29.2 30.0 29.0 29.0 29.0 31.0 31.0 31.0 31.0 31.0	MAX 32.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	MIN 32.0 31.0 31.0 31.0 30.0 28.0 27.0 28.0 29.0 31.0 31.0 29.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 16-0 16-0 17-0 17-0 17-0 17-0 18-0 18-0 20-0 21-0 21-0 21-0 21-0	MIN 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 19.0 19.0 17.0	MAX 19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 20.6 21.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0	MAX 27. C 27. 0 27.	MIN 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 25.0 24.0 24.0 24.0	MAX 28.0 28.0 29.0 30.0 31.0 31.0 31.0 30.0 29.0 29.0 29.0 30.0 30.0 30.0	MIN 27.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 2	MAX 30.0 31.0 31.0 31.0 32.0 32.0 32.0 32.0 32.0 31.0 31.0 31.0 31.0	MIN 29.2 30.0 29.0 29.0 29.0 31.0 31.0 31.0 31.0 31.0 31.0	MAX 32.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	MIN 32.0 31.0 31.0 31.0 30.0 28.0 27.0 28.0 29.0 31.0 29.0 29.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 16-0 16-0 17-0 17-0 17-0 18-0 18-0 20-0 21-0 21-0 20-0 18-0	HIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0	19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0	MIN 18.0 19.0 20.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0	HAX 27.C 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 25.0 25.0 26.0 25.0 24.0 24.0	MAX 28.0 28.0 29.0 30.0 31.0 31.0 31.0 29.0 29.0 29.0 30.0 30.0 30.0	MIN 27.0 27.0 28.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 29	MAX 30.0 31.0 31.0 29.0 32.0 32.0 32.0 32.0 31.0 31.0 31.0 31.0 31.0 31.0	MIN 29.2 30.0 29.0 29.0 29.0 31.0 31.0 31.0 31.0 31.0 31.0	MAX 32.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	MIN 32.0 31.0 31.0 30.0 28.0 27.0 28.0 29.0 29.0 29.0 27.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 16-0 16-0 17-0 17-0 17-0 17-0 18-0 18-0 20-0 21-0 20-0 18-0 18-0 18-0 18-0	MIN 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 18.0 19.0 18.0	19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 25.0 26.0	MIN 18.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 25.0	27.C 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 24.0 24.0 24.0 24.0 24.0 25.0	28.0 28.0 28.0 29.0 31.0 31.0 30.0 29.0 29.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 3	MIN 27.0 27.0 28.0 29.0 30.0 30.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 2	30.0 31.0 31.0 31.0 30.0 32.0 32.0 32.0 32.0 31.0 31.0 31.0 31.0 31.0 31.0	29.2 30.0 29.0 29.0 29.0 29.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	MAX 32.0 32.0 31.0 31.0 31.0 28.0 29.0 29.0 31.0 31.0 31.0 29.0 29.0 29.0 27.0 27.0 27.0	HIN  32.0 31.0 31.0 31.0 30.0  28.0 27.0 28.0 29.0 31.0 29.0 27.0 26.0 26.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 16.0 16.0 17.0 17.0 17.0 17.0 21.0 20.0 21.0 21.0 21.0 18.0 18.0	HIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 19.0 19.0 19.0 19.0 19.0 19.0	19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 24.0 24.0 25.0	MIN 18.0 19.0 20.0 21.0 21.0 21.0 22.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0	HAX 27.C 27.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0 26.0 24.0 24.0	#IN 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 25.0 24.0 24.0 24.0 24.0 25.0	28.0 28.0 28.0 30.0 31.0 31.0 31.0 30.0 29.0 29.0 29.0 30.0 30.0 30.0 30.0	MIN 27.0 27.0 27.0 29.0 30.0 30.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 2	30.0 31.0 31.0 29.0 30.0 31.0 32.0 32.0 32.0 31.0 31.0 31.0 31.0 31.0	MIN 29.2 30.0 29.0 29.0 29.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	MAX 32.0 32.0 31.0 31.0 31.0 31.0 29.0 29.0 31.0 31.0 31.0 29.0 29.0 29.0 27.0	HIN 32.0 31.0 31.0 31.0 31.0 31.0 31.0 27.0 28.0 29.0 31.0 27.0 28.0 27.0 28.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 16-0 16-0 17-0 17-0 17-0 17-0 21-0 20-0 21-0 21-0 21-0 21-0 18-0 18-0 18-0 18-0	HIN 16.0 16.0 16.0 16.0 16.0 17.0 17.0 18.0 19.0 19.0 19.0 19.0 19.0 18.0 18.0 18.0	19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 23	MIN 18.0 19.0 20.0 20.0 21.0 21.0 21.0 22.0 22.0 22	27. C 27. 0 27. 0 27. 0 27. 0 27. 0 27. 0 27. 0 27. 0 27. 0 27. 0 26. 0 25. 0 24. 0 24. 0 24. 0 25. 0 24. 0 25. 0 24. 0 25. 0 26. 0 27. 0	MIN 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 25.0 24.0 24.0 24.0 24.0 25.0 26.0 27.0	28.0 28.0 29.0 29.0 30.0 31.0 31.0 30.0 29.0 29.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0	MIN 27.0 27.0 28.0 28.0 29.0 30.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 2	30.0 31.0 31.0 29.0 30.0 32.0 32.0 32.0 32.0 31.0 31.0 31.0 31.0 31.0	29.0 30.0 29.0 29.0 29.0 31.0 31.0 31.0 31.0 31.0 31.0 30.0 31.0 31	MAX 32.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 29.0 31.0 31.0 27.0 27.0 27.0	MIN 32-0 31-0 31-0 31-0 31-0 30-0 28-0 27-0 28-0 29-0 29-0 21-0 27-0 26-0 27-0 26-0 27-0 26-0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 20 21 22	MAX 16-0 16-0 17-0 17-0 17-0 17-0 18-0 18-0 18-0 18-0 18-0 18-0 19-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 18	MIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 19.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0	19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 23.0 24.0 24.0 26.0 26.0 26.0 26.0	MIN 18.0 19.0 20.0 20.0 21.0 21.0 21.0 22.0 22.0 22	#AX 27.C 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 26.0 26.0 27.0 27.0 27.0 27.0 27.0 27.0 26.0 25.0 24.0 24.0 24.0 24.0 27.0 27.0 27.0 27.0 27.0 27.0	MAX 28.0 28.0 29.0 30.0 31.0 31.0 31.0 30.0 29.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 3	MIN 27.0 27.0 28.0 28.0 29.0 30.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 2	MAX 30.0 31.0 31.0 31.0 32.0 32.0 32.0 32.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	MIN 29.2 30.0 29.0 29.0 29.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	MAX 32.0 32.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 29.0 29.0 29.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 32-0 31-0 31-0 31-0 30-0 28-0 28-0 29-0 31-0 29-0 28-0 27-0 28-0 27-0 28-0 27-0 28-0 28-0 27-0 28-0 28-0 28-0 28-0 28-0 28-0 28-0 28
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	MAX 16-0 16-0 17-0 17-0 17-0 17-0 17-0 21-0 22-0 21-0 21-0 21-0 21-0 18-0 18-0 18-0 18-0 18-0 18-0 18-0 1	MIN 16.0 16.0 16.0 16.0 17.0 17.0 17.0 18.0 19.0 19.0 19.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18	19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 23.0 23.0 24.0 24.0 26.0 26.0 26.0 26.0 25.0 25.0 25.0	MIN 18.0 19.0 20.0 20.0 21.0 21.0 21.0 22.0 22.0 22	#AX 27.C 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	MIN 26.0 26.0 27.0 27.0 27.0 27.0 27.0 26.0 28.0 24.0 25.0 27.0 26.0 27.0 26.0 27.0 28.0 28.0 28.0 28.0	28.0 28.0 29.0 30.0 31.0 31.0 31.0 29.0 30.0 30.0 30.0 30.0 30.0 30.0 30.0 3	MIN 27.0 27.0 28.0 28.0 29.0 30.0 29.0 29.0 29.0 29.0 29.0 29.0 29.0 2	MAX 30.0 31.0 31.0 29.0 30.0 31.0 32.0 32.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	MIN 29.2 30.0 29.0 29.0 29.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31	MAX 32.0 32.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 29.0 29.0 29.0 27.0 27.0 27.0 27.0 27.0 26.0 26.0	MIN 32-0 31-0 31-0 31-0 31-0 28-0 27-0 28-0 29-0 31-0 28-0 27-0 26-0 26-0 26-0 26-0
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## 09523000 ALL-AMERICAN CANAL NEAR IMPERIAL DAM, ARIZ.-CALIF

LOCATION. -- Lat 32°52'17", long 114°28'47", in SE½NW½ sec. 17, T. 15 S., R. 24 E., San Bernardino meridian in California, Imperial County, at gaging station on left bank, 6,000 ft downstream from intake at west end of Imperial Dam and 13.7 miles upstream from turnout to Yuma Main Canal

PERIOD OF RECORD, -- Chemical analyses: August 1969 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	CH	ARGE AT	PER- URE	(GANIC (ITRO- GEN (N) MG/L)	TGTAL NITRO- GÉN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	AMMONIA (NH4) (MG/L)	NITRATE (NO3) (MG/L)
DCT. 22	1355	. 5	000	19.0	•31			•02	1.2
NDV. 19	1600	) 1	670	15.0	.00				1.2
DEC. 17 JAN.	1345	, 4	600	13.0	.24			.18	1.9
14	1200		140	11.0					,
20 FEB.	1 300	) :	3870	13.6	.27		.27	•00	1.8
18 MAR.	1030	,	4450	15.5	.76		.86	.13	2.4
17	1115	5 1	3490	17.5	.31		•55	-31	2.5
APR. 22	1145	5	8400	18.0	.14		.41	.35	1.9
MAY 19	1100		7600	25.0	•72	1.1	.74	.03	1.7
JUNE 16	1115	5	6950	25.0	•51	.96	.54	.04	1.8
JULY 29	1119	5	7610	28.5	.66	.94	.66	.00	1.2
AUG. 13	1119	5	7800	39.0	.54		.57	.04	1.3
SEP.	1045	;	5590	31.0	•36		.39	.04	1.0
DAT		PHOS- PHATE (PO4) (MG/L)	DIS- SOLVEO URTHO PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L	DIS SOLV SOLI (RES OUE 180 ) (MG/	ED DI OS SOL I- SDL AT (TO C) PE	VEO SOL 10S SOL NS (TO R PE	VED FI IDS CON INS UCTA	ID- INCE CRO-
OCT.	_								
22.	••	.17	.00	• 0	4 8	96 l	.22 121	100	1360
19.		.19	.05	• 0	8 11	20 1	.52 50	50 1	700
DEC. 17.		.20	.04	.0	8 9	44 1	.28 117	700	1420
JAN. 14.				-			.29 132		1360
20. FEB.		• 09	.04	.0					1400
18.	• •	-17	.05	- 0	6 10	00 1	.36 120	000	1470
17. APR.		-49	.04	.1	1			~-	
27.	••	. 34	• 07	.0	8 8	68 l	.18 197	700	1320
MAY 19.		•70	.07	.3	3 9	02 1	.23 185	500	1340

#### PESTICIDE ANALYSES

. 05

.03

.01

.01

•70 .07

• 05

.08

.09

19... JUNE 16...

16... JULY 29... AUG. 13... SEP. 16...

.07

.05

.01

.01

904

908

886

912

1.23 17000

1.23 18700

1.20 18700

1.24 13800

1380

1340

1330

1360

	ALDRIN	DOD	орт	DI- ELDRIN	ENORIN	HEPTA- CHLOR	HEPTA- CHLOR EPOXIDE	LINOANE	2,4-0	SILVEX	2,4,5-T	CHLOR-
DATE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
DCT.												
22 NOV.	•00	•00	.00	•00	•00	.00	• 00	.00	.00	.00	.00	
19 JAN.	•00	.00	• 90	•00	•00	.00	•00	•00	•00	.00	.00	
20 FEB.	.00	•00	• 0.0	•00	.00	.00	• <b>0</b> 0	.00	.00	•00	.00	
18 MAR.	•00	•00	.00	•00	•00	.00	•00	.00	•00	-00	.00	
17 APR.	.00	•00	•00	•00	•00	.00	•00	.00	.00	-00	.00	
22 May	.00	•00	• 00	•00	•00	•00	•00	.00	•00	•00	•00	
19 JUNE	.00	•00	.00	.00	•00	.00	•00	.00	.02	•00	-00	•00
16	•00	•00	.00	-00	•00	.00	• 00	•00	.00	.00	.00	.00

09525500 YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON, AT YUMA, ARIZ. (Irrigation network, pesticide, and radiochemical station)

LOCATION. --Lat 32°43'39", long 114°37'13", in NWinel sec.35, T.16 S., R.22 E., San Bernardino meridian, Yuma County, at gaging station at Colorado River siphon outlet on Arizona side of river, 0.2 mile upstream from bridge on U.S. Highway 80 over Colorado River at Yuma, 0.3 mile west of old Yuma Territorial Prison, and 3.5 miles downstream from siphon-drop powerplant.

PERIOD OF RECORD. -- Chemical analyses: September 1926 to September 1928, October 1942 to September 1970 (discontinued).
Water temperatures: May 1961 to September 1970 (discontinued).

### EXTREMES. -- 1969-70:

REMES. --1969-70:
Dissolved solids: Maximum, 1,090 mg/l Nov. 20-26; minimum, 867 mg/l Apr. 1-30.
Hardness: Maximum, 440 mg/l Nov. 20-26; minimum, 368 mg/l July 1-31, Aug. 1-31.
Specific conductance: Maximum daily, 1,740 micromhos Nov. 25; minimum daily, 1,260 micromhos Aug. 20.
Water temperatures: Maximum, 31.0°C on several days during August and Sptember; minimum, 6.0°C Jan. 7

#### Period of record (1943-70):

Dissolved solids: Maximum, 1,090 mg/l Nov. 20-26, 1969; minimum, 532 mg/l Jan. 1-10, 1953.

Hardness: Maximum, 520 mg/l July 7, 1962; minimum, 260 mg/l Jan. 1-10, 1953.

Specific conductance: Maximum daily, 1,740 microm

DATE	MEAN DIS- C <b>HARGE</b> (CFS)	SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
OCT.									
01-31	415	14	119	20		152		176	0
NOV. G1-16	187	15	94	37		163		181	0
20-26	146	16	108	41		208		223	ŏ
27-30	202	15	101	44		177		201	ŏ
DEC.	202	13		77		1,,,		201	•
01-31	158	15	98	37		171		184	4
JAN.									
01-31	254	14	94	39		156		181	2
FEB.									
01-28	424	13	98	36		164		193	3
MAR.									
01-31	357	11	105	30		151		180	4
APR.									
01-30	564	9.5	100	32	140		4.4	174	0
MAY									
01-31	598	9.8	100	32		155		170	0
JUNE									
01-30	519	10	100	31		160		161	2
JULY			_						
01-31	561	11	95	32		155		159	0
AUG.								4-0	_
01-31	441	12	100	29		152		150	2
SEP. 01-30	508	11	100	32		161		163	4
01-30	208	11	100	32		101		163	•
WTD. AVG.		12	101	32		157		171	2
TIME WID.								•	
AVG.	416	12	101	32		159		173	2
TOT. LOAD									
(TONS)		4680	41000	12800		56900		69400	634

## 09525500 YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON, AT YUMA, ARIZ. -- Continued CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		CHEMICAL P		TATEN TEAN					
DATE	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	DIS- SOLVED AMMONIA NITRO- GEN (N) (MG/L)	DIS_ SOLVED NITRATE (NO3) (MG/L)	TOTAL PHOS- PHORUS (PO4) (MG/L)	DIS- SOLVED BORON (B) (UG/L)
DHIE	(HU/L)	(HO/L)	(NO/L)	(NG/L)	(NO/L)	(10/1,	(HO/L)	(11071)	(00/2/
OCT. 01-31 NOV.	356	139		1.4	1.7		1.4	.02	
01-16	363	152		.26	.71	.16	1.3	.04	
20-26 27-30	410	200					1.2		
DEC. 01-31		175 157		.39	.84	.13	1.3	.01	
JAN. 01-31	364	144		.42	.84	.09	1.5	.03	
FEB. 01-28		144		.47	1.0	.21	1.6	.02	
MAR. 01-31	352	132		3.0	5.0	.00	9.0	.06	
APR. 01-30 May	362	130	.5	.66	1.0	.00	1.7	.05	230
01-31 JUNE	368	137		.54	.86	.00	1.4	.07	230
01-30 JULY	371	142		.50	.86	.00	1.6	.03	230
01-31 AUG.	365	137		.35	.69	.00	1.5	.05	210
01-31 SEP.	365	136		.45	.79	.00	1.5	.03	220
01-30	372	142		.60	.89	.00	1.3	.05	220
WTD. AVG. TIME WTD. AVG.	365	139 142		.76	1.2	.03	2.0	.04	
TOT. LOAD	366	142		.78	1.3	.05	2.1	.04	
(TONS)	149000	56700		305	498	12	830	17	
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER	SOLVED SOLIDS (TONS PER	NESS (CA+MG) (MG/L)	CAR- BONATE HARD- NESS	AD- SORP- Tion	FIC COND- UCTANCE (MICRO-	
OCT. 01-31 NOV.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	NESS (CA·MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.2
OCT. 01-31 NOV. 01-16	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT) 1.29	SOLVED SOLIDS (TONS PER DAY)	NESS (CA.MG) (MG/L) 380 388	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO 3.4	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.2 8.1
OCT. 01-31 NOV.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT) 1.29 1.30	SOLVED SOLIDS (TONS PER DAY)	NESS (CA.MG) (MG/L) 380 388 440	CAR- BONATE HARD- NESS (MG/L) 236 240 258	AD- SORP- TION RATIO 3.4 3.6 4.3	FIC COND- UCTANCE (MICRO- MHOS) 1380 1440 1710	(UNITS) 8.2 8.1 8.1
OCT. 01-31 NOV. 01-16 20-26 27-30 DEC. 01-31	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 895 916 1090	SOLVED SOLIDS (TONS PER AC-FT) 1.29	SOLVED SOLIDS (TONS PER DAY)	NESS (CA.MG) (MG/L) 380 388	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO 3.4	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.2 8.1
OCT. 01-31 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-31	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 895 916 1090 1000	SOLVED SOLIDS (TONS PER AC-FT) 1.29 1.30 1.48 1.36	SOLVED SOLIDS (TONS PER DAY) 1060 483 430 545	NESS (CA.MG) (MG/L) 380 388 440 434	CAR- BONATE HARD- NESS (MG/L) 236 240 258 270	AD- SORP- TION RATIO 3.4 3.6 4.3 3.7	FIC COND- UCTANCE (MICRO- MHOS) 1380 1440 1710 1560	8.2 8.1 8.1 8.2
OCT. 01-31 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-31 FEB. 01-28	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 950 956   998	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 895 916 1090 1000	SOLVED SOLIDS (TONS PER AC-FT) 1.29 1.30 1.48 1.36	SOLVED SOLIDS (TONS PER DAY) 1060 483 430 545	NESS (CA+MG) (MG/L) 380 388 440 434	CAR- BONATE HARD- NESS (MG/L) 236 240 258 270	AD- SORP- TION RATIO 3.4 3.6 4.3 3.7	FIC COND- UCTANCE (MICRO- MHOS) 1380 1440 1710 1560	8.2 8.1 8.1 8.2 8.3
OCT. 01-31 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-31 FEB.	SOLVED SOLIDS (RESI- DUE AT 180 °C) (MG/L) 950 956  998	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 895 916 1090 1000 949	SOLVED SOLIDS (TONS PER AC-FT) 1.29 1.30 1.48 1.36 1.36	SOLVED SOLIDS (TONS PER DAY) 1060 483 430 545 426	NESS (CA·MG) (MG/L) 380 388 440 434 396	CAR- BONATE HARD- NESS (MG/L) 236 240 258 270 238	AD- SORP- TION RATIO 3.4 3.6 4.3 3.7 3.7	FIC COND- UCTANCE (MICRO- MHOS) 1380 1440 1710 1560 1470	8.2 8.1 8.1 8.2 8.3
OCT. 01-31 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 950 956  978 962	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 895 916 1090 1000 949 906	SOLVED SOLIDS (TONS PER AC-FT) 1.29 1.30 1.48 1.36 1.36 1.31	SOLVED SOLIDS (TONS PER DAY) 1060 483 430 545 426 660	NESS (CA-MG) (MG/L) 380 388 440 434 396 396	CAR- BONATE HARD- NESS (MG/L) 236 240 258 270 238 244 229	AD- SORP- TION RATIO 3.4 3.6 4.3 3.7 3.7 3.7 3.4	FIC COND- UCTANCE (MICRO- MHOS) 1380 1440 1710 1560 1470 1400	8.2 8.1 8.1 8.2 8.3 8.3
OCT. 01-91 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-30 APR. 01-90 JUNE	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 950 956  998 962 936 916 870	SOLVED SOLVED SOLVED SOLIDS (SUM OF CONSTITTUENTS) (M6/L)  895 916 1090 1000 949 906 923 896 867 888	SOLVED SOLIDS (TONS PER AC-FT)  1.29 1.30 1.48 1.36 1.36 1.31 1.27 1.25 1.18	SOLVED SOLIDS (TONS PER DAY)  1060 483 430 545 426 660 1070 883 1330	NESS (CA+M6) (H6/L) 380 388 440 434 396 396 380 380	CAR- BONATE HARD- NESS (MG/L) 236 240 258 270 238 244 229 232 238	AD- SORP- TION RATIO 3.4 3.6 4.3 3.7 3.7 3.4 3.6 3.3	FIC COND- UCTANCE (HICRO- HHOS) 1380 1440 1710 1560 1470 1490 1390 1390 1360	(UNITS)  8.2  8.1  8.1  8.2  8.3  8.3  8.3  8.3
OCT. 01-91 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-31 FEB. 01-28 MAR. 01-31 APR. 01-31 JUNE 01-30 JULY	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 950 956  978 962 936 916 870 854	SOLVED SOLVED SOLVED SOLIDS (SUM OF CONSTITTUENTS) (MG/L)  895  916 1090 1000 949 906 923 896 867 888	SOLVED SOLIDS (TONS PER AC-FT)  1.29 1.30 1.48 1.36 1.31 1.27 1.25 1.18 1.16	SOLVED SOLVED SOLIDS (TONS PER DAY)  1060 483 430 545 426 660 1070 883 1330 1380	NESS (CA+M6) (H6/L) 380 388 440 434 396 392 386 380 380 376	CAR- BONATE HARD- NESS (MG/L) 236 240 250 270 238 244 229 232 238 240 240	3.4 3.4 3.6 4.3 3.7 3.7 3.4 3.6 3.3 3.1	FIC COND- UCTANCE (HICRO- HHOS)  1380 1440 1710 1560 1470 1400 1350 1390 1360 1380	(UNITS)  8.2  8.1  8.1  8.2  8.3  8.3  8.3  8.3  8.3
OCT. 01-91 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-91 FEB. 01-92 MAR. 01-93 APR. 01-93 JUNE 01-93 JUNE 01-91 JUNE 01-91 JUNE 01-91 JUNE 01-91	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 950 956  978 962 936 916 870 854	SOLVED SOLVED SOLVED SOLIDS (SUM OF CONSTITUTION OF SOLID SO	SOLVED SOLVED SOLIDS (TONS PER AC-FT)  1.29 1.30 1.48 1.36 1.31 1.27 1.25 1.18 1.16 1.24 1.32	SOLVED SOLVED SOLIDS (TONS PER DAY)  1060 483 430 545 426 660 1070 983 1330 1380 1280 1470	NESS (CA+M6) (HG/L) 380 388 440 434 396 392 386 380 380 376 368	CAR-BONATE HARD-NESS (MG/L) 236 240 258 270 238 244 229 232 240 240 240 238	3.4 3.4 3.6 4.3 3.7 3.7 3.4 3.6 3.3 3.1 3.5	FIC COND- UCTANCE (HICRO- HHOS) 1380 1440 1710 1560 1470 1400 1350 1380 1350 1350	(UNITS)  8.2  8.1  8.1  8.2  8.3  8.3  8.3  8.3  8.3  8.3
OCT. 01-91 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-31 FEB. 01-32 MAR. 01-31 APR. 01-30 JULY 01-31 AUG. 01-31	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 950 956  978 962 936 916 870 854 914	SOLVED SOLIDS (SUM OF CONSTITUTION OF CONST	SOLVED SOLIDS (TONS PER AC-FT)  1.29 1.30 1.48 1.36 1.31 1.27 1.25 1.18 1.16 1.24	SOLVED SOLVED SOLIDS (TONS PER DAY)  1060 483 430 545 426 660 1070 983 1330 1380 1290 1470	NESS (CA+M6) (HG/L) 380 388 440 434 396 392 386 380 376 368 368	CAR-BONATE HARD-NESS (MG/L) 236 240 258 270 238 244 229 232 240 240 240 238 242	3.4 3.4 3.6 4.3 3.7 3.7 3.4 3.6 3.3 3.1 3.5 3.6	FIC COND- UCTANCE (MICRO- MHOS) 1380 1440 1710 1560 1470 1400 1350 1330 1360 1390 1350 1340	(UNITS)  8.2  8.1  8.1  8.2  8.3  8.3  8.3  8.1  8.2  8.3  8.2  8.3
OCT. 01-31 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-31 FEB. 01-31 APR. 01-31 APR. 01-30 JULY 01-31 AUG. 01-31 SEP. 01-31	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 950 956  978 962 936 916 870 954 914 882	SOLVED SOLVED SOLVED SOLIDS (SUM OF CONSTITUTION OF SOLID SO	SOLVED SOLIDS (TONS PER AC-FT)  1.29 1.30 1.48 1.36 1.31 1.27 1.25 1.18 1.16 1.24 1.32	SOLVED SOLVED SOLIDS (TONS PER DAY)  1060 483 430 545 426 660 1070 983 1330 1380 1280 1470	NESS (CA+M6) (HG/L) 380 388 440 434 396 392 386 380 380 376 368	CAR-BONATE HARD-NESS (MG/L) 236 240 258 270 238 244 229 232 240 240 240 238	3.4 3.4 3.6 4.3 3.7 3.7 3.4 3.6 3.3 3.1 3.5 3.5	FIC COND- UCTANCE (HICRO- HHOS) 1380 1440 1710 1560 1470 1400 1350 1380 1350 1350	(UNITS)  8.2  8.1  8.1  8.2  8.3  8.3  8.3  8.1  8.2  8.3  8.2  8.3  8.4
OCT. 01-31 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-31 FEB. 01-30 MAY 01-31 JUNE 01-30 JULY 01-31 SEP. 01-30 WTD. AVG. TIME WTD. AVG.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 950 956  978 962 936 916 870 854 914	SOLVED SOLIDS (SUM OF CONSTITUTION OF CONST	SOLVED SOLIDS (TONS PER AC-FT)  1.29 1.30 1.48 1.36 1.31 1.27 1.25 1.18 1.16 1.24	SOLVED SOLVED SOLIDS (TONS PER DAY)  1060 483 430 545 426 660 1070 983 1330 1380 1290 1470	NESS (CA+M6) (MG/L) 380 380 440 434 394 396 380 380 368 368 380	CAR-BONATE HARD-NESS (MO/L) 234 240 258 270 292 292 298 240 240 240 238 242 240	3.4 3.4 3.6 4.3 3.7 3.7 3.4 3.6 3.3 3.1 3.5 3.6	FIC COND- UCTANCE (MICRO- MHOS) 1380 1440 1710 1560 1470 1400 1350 1390 1360 1380 1350 1340 1390	(UNITS)  8.2  8.1  8.1  8.2  8.3  8.3  8.3  8.1  8.2  8.3  8.2  8.3
OCT. 01-31 NOV. 01-16 20-26 27-30 DEC. 01-31 JAN. 01-31 FEB. 01-31 APR. 01-31 APR. 01-30 ULY 01-31 AUG. 01-31	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L) 950 956  978 962 936 916 870 854 914 972 914	SOLVED SOLVED SOLIDS (SUM OF CONSTITUTION OF C	SOLVED SOLVED SOLIDS (TONS PER AC-FT)  1.29  1.30 1.48 1.36 1.31 1.27 1.25 1.18 1.16 1.24 1.32 1.24 1.20 1.25	SOLVED SOLVED SOLIDS (TONS PER DAY)  1060 483 430 545 426 660 1070 983 1330 1380 1290 1470	NESS (CA+M6) (MG/L) 380 380 440 424 396 392 386 380 368 368 380 381	CAR-BONATE HARD-NESS (MO/L) 234 240 258 270 238 244 229 232 240 240 238 242 240 238	3.4 3.4 3.6 4.3 3.7 3.7 3.4 3.6 3.3 3.1 3.5 3.5 3.4 3.5	FIC COND- UCTANCE (MICRO- MHOS) 1380 1380 1340 1710 1560 1470 1400 1350 1390 1360 1380 1360 1370	(UNITS)  8.2  8.1  8.1  8.2  8.3  8.3  8.3  8.1  8.2  8.3  8.2  8.3  8.4

## 09525500 YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON, AT YUMA, ARIZ. -- Continued

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	TIME	ALDRIN	CHLOR- DANE	000	DDE	TUG	DI- Eldrin
DATE	14.112	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
OCT.							
07	1030	.00		.00	.00	.00	.00
NOV. 04	1115	.00					
DEC.	1115	.00		.00	.00	.00	.00
02 Jan.	1100	.00		.00	.00	.00	.00
06	1100	.00		.00	.00	.00	.00
FEB. 03 Mar.	1115	.00		.00	.00	.00	.00
03	0930	.00		.00	.00	.00	.00
APR. 07	1100	.00		.00	.00	.00	.00
MAY 05	1030	.00	.0	.00	.00	.00	.00
JUNE 02	1045	.00	.0	.00	.00	.00	.00
JULY 07	0930	.00	.0	.00	.00	.00	.00
AUG. 04	1000	.00	.0	•00	.00	.00	.00
SEP.							
01	1330	.00	.0	.00	.00	.00	.00
	ENDRIN	HEPTA- CHLOR	HEPTA- CHLOR EPOXIDE	LINDANE	2,4-D	2,4,5-T	SILVEX
DATE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
OCT.	.00	.00	.00	.00	.00	.00	.00
07 NOV.							
04 DEC.	.00	.00	.00	.00	.00	.00	.00
02 JAN.	.00	.00	.00	.00	.00	.00	.00
06 FEB.	.00	.00	.00	.00	.00	.00	.00
03	.00	.00	.00	.00	.00	.00	.00
03 APR.	.00	.00	.00	.00	.00	.00	.00
07	.00	.00	.00	.00	.00	.00	.00
MAY 05	.00	.00	.00	.00	.00	.00	.00
JUNE 02	.00	.00	.00	.00	.00	.00	.00
JULY 07	.00	.00	.00	.00	.00	.00	.00
AUG. 04 SEP.	.00	.00	.00	.00	.00	.00	.00

DATE	DIS- SOLVED GROSS ALPHA AS U-NAT. (PC/L)	GROSS ALPHA AS U-NAT.	GROSS ALPHA AS U-NAT,	GROSS ALPHA AS		GROSS BETA AS CS-137	/490	GROSS BETA AS SR90 /Y90		NATURAL URANIUM (U)	TOTAL FILT- RABLE RESIDUE	TOTAL NON- FILT" RABLE RESIDUE (MG/L)
JAN. 06	8.8	₹.1	26	<.4	15	.6	12	.6	.15	5.9	970	2
JULY 07	6.7	.4	20	1.2	12	2.7	9.4	2.4	.24	5.5	940	20

## 09525500 YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON, AT YUMA, ARIZ. -- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1360	1430	1480	1450	1430	1320	1290	1330	1410	1330	1370	1370
2	1350	1460	1500	1450	1480	1300	1300	1320	1410	1330	1390	1380
3	1360	1480	1490	1450	1480	1290	1300	1350	1380	1320	1340	1350
4	1360	1490	1490	1380	1420	1310	1330	1390	1370	1330	1350	1410
5	1350	1450	1480	1380	1410	1290	1330	1340	1370	1320	1310	1420
6	1370	1430	1470	1390	1380	1340	1320	1350	1450	1330	1280	1420
7	1370	1440	1460	1360	1360	1400	1320	1320	1400	1320	1330	1440
8	1370	1410	1520	1360	1380	1420	1320	1350	1440	1310	1340	1410
9	1380	1430	1640	1350	1380	1490	1310	1360	1380	1360	1340	1420
10	1350	1420	1630	1360	1370	1490	1310	1370	1350	1320	1370	1410
11	1350	1430	1520	1360	1390	1500	1320	1430	1360	1360	1380	1400
12	1360	1430	1470	1380	1370	1480	1340	1360	1370	1390	1380	1360
13	1380	1460	1440	1380	1350	1350	1320	1340	1370	1340	1330	1400
14	1350	1440	1450	1390	1370	1340	1330	1320	1390	1340	1350	1410
15	1350	1430	1480	1380	1430	1360	1320	1340	1360	1350	1390	1430
16	1370		1470	1360	1530	1330	1320	1330	1360	1340	1340	1400
17	1380			1380	1600	1430	1340	1340	1380	1330	1350	1410
18	1390		1410	1390	1630	1340	1360	1350	1360	1360	1350	1350
19	1400		1430	1400	1490	1310	1360	1330	1380	1360	1300	1370
20	1420	1710	1520	1470	1430	1320	1360	1290	1400	1370	1260	1400
21	1390	1710	1450	1440	1360	1330	1360	1340	1400	1330	1320	1410
22	1380	1690	1440	1490	1340	1310	1350	1330	1380	1320	1370	1400
23	1370	1710	1450	1470			1350	1370	1350	1340	1370	1400
24	1370	1730	1430	1450			1360	1410	1390	1350		1390
25	1400	1740	1460	1450		1310	1360	1400	1360	1400		1370
26	1440	1700	1480	1460	1310	1310	1370	1400	1370	1400		1400
27	1460	1610	1530		1320	1330		1400	1390	1370	1320	1420
28	1460	1570	1600		1310	1320		1380	1410	1350	1340	1410
29	1440	1580	1460	1440		1330		1410	1400	1380	1300	1400
30	1410	1480	1440	1430		1340	1360	1430	1380	1370	1370	1400
31	1420		1460	1420		1310		1450		1360	1460	
AVG	1380	1530	1490	1410	1410	1360	1330	1360	1380	1350	1350	1400

### 09525500 YUMA MAIN CANAL BELOW COLORADO RIVER SIPHON, AT YUMA, ARIZ. -- Continued

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ì	27.0	18.0	13.0	9.0	10.0	16.0	16.0	18.0	25.0	27.0	29.0	31.0
ż	26.0	18.0	14.0	8.0	11.0	14.0	16.0	19.0	26.0	27.0	30.0	31.0
3	26.0	18.0	14.0	8.0	10.0	14.0	16.0	19.0	26.0	28.0	30.0	30.0
4	23.0	18.0	14.0	8.0	11.0	14.0	16.0	20.0	26.0	29.0	29.0	30.0
5	21.0	18.0	14.0	8.0	11.0	14.0	16.0	21.0	26.0	29.0	29.0	29.0
6	21.0	18.0	14.0	8.0	11.0	13.0	17.0	21.0	26.0	29.0	30.0	28.0
7	20.0	18.0	14.0	6.0	12.0	14.0	17.0	21.0	27.0	29.0	30.0	27.0
8	17.0	18.0	13.0	7.0	12.0	15.0	17.0	21.0	27.0	29.0	31.0	27.0
9	18.0	18.0	13.0	7.0	13,0	15.0	18.0	21.0	27.0	29.0	31.0	28.0
10	20.0	18.0	13.0	8.0	14.0	16.0	19.0	22.0	26.0	29.0	31.0	28.0
11	22.0	18.0	12.0	9.0	14.0	15.0	19.0	22.0	25.0	28.0	31.0	29.0
12	20.0	18.0	13.0	10.0	14.0	15.0	19.0	22.0	25.0	28.0	31.0	30.0
13	19.0	18.0	13.0	10.0	14.0	13.0	19.0	22.0	24.0	29.0	31.0	29.0
14	19.0	18.0	12.0	11.0	15.0	16.0	19.0	23.0	23.0	29.0	31.0	30.0
15	19.0	18.0	12.0	11.0	15.0	14.0	18.0	23.0	23.0	29.0	30.0	27.0
16	20.0		12.0	12.0	15.0	16.0	18.0	23.0	24.0	29.0	30.0	24.0
17	21.0			12.0	15.0	17.0	17.0	23.0	24.0	29.0	30.0	26.0
18	20.0		12.0	12.0	16.0	17.0	17.0	24.0	25.0	29.0	31.0	25.0
19	19.0		12.0	12.0	14.0	16.0	17.0	25.0	26.0	29.0	30.0	26.0
20	18.0	13.0	12.0	12.0	13.0	15.0	18.0	24.0	27.0	29.0	30.0	24.0
21	18.0	13.0	13.0	12.0	13.0	14.0	18.0	24.0	27.0	29.0	30.0	25.0
22	18.0	13.0	13.0	13.0	13.0	16.0	17.0	24.0	28.0	29.0	30. <b>0</b>	27.0
23	18.0	13.0	13.0	12.0			17.0	24.0	27.0	29.0	30.0	24.0
24	18.0	13.0	13.0	12.0			18.0	24.0	27.0	29.0		24.0
25	18.0	13.0	13.0	12.0		17.0	18.0	24.0	28.0	29.0		24.0
26	19.0	14.0	13.0	12.0	14.0	18.0	19.0	24.0	28.0	29.0		22.0
27	19.0	14.0	13.0		14.0	18.0		24.0	28.0	29.0	29.0	25.0
28	20.0	13.0	13.0		14.0	16.0		24.0	28.0	29.0	30.0	23.0
29	21.0	13.0	11.0	11.0		16.0		24.0	28.0	29.0	30.0	21.0
30	19.0	13.0	10.0	10.0		16.0	17.0	24.0	27.0	29.0	31.0	22.0
31	18.0		9.0	11.0		16.0		24.0		29.0	31.0	
AVG	20.0	16.0	12.5	10.0	13.0	15.5	17.5	22.5	26.0	29.0	30.0	26.5

09529160 SOUTH GILA PUMP OUTLET CHANNEL NO. 3 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°43'04", long 114°30'12", in NW4SE4 sec.22, T.8 S., R.22 W., Yuma County, at gaging station 0.5 mile upstream from outlet to Gila River and 6 miles east of Yuma.

PERIOD OF RECORD .-- Chemical analyses: October 1968 to September 1970.

REMARKS.--No flow for many days of most months. Unpublished miscellaneous chemical analyses for water years 1965-68 available in district office, Tucson, Ariz.

DATE	TIME	DIS- CHARGE (CFS)	BIS- SOLVED SILICA (SIO2) (MO/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SOBIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
FEB. 25 MAR.	1240	38		234	118		364		1280
31			21	166	77	393	304	300	725
APR. 27 JUNE	0930	46	22	262	811	727	354	520	1340
26			20	256	98	600	256	370	1240
SEP. 25	0915	1.4	10	103	35	158	170	390	141
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVEB SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
FEB.	SOLVED SOLIDS (RESI- DUE AT 180°C)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
FEB. 25	SOLVED SOLIDS (RESI- DUE AT 180°C)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	NESS (CA,MG)	CAR- BONATE HARD- NESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO-		ATURE
FEB. 25 MAR. 31	SOLVED SOLIDS (RESI- DUE AT 180°C)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
FEB. 25 MAR. 31 APR.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
FEB. 25 MAR. 31	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L) 1070 730	CAR- BONATE HARD- NESS (NG/L) 772	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 5350	(UNITS) 7.7 7.9	ATURE (DEG C) 22.0 21.0

09529240 SOUTH GILA PUMP OUTLET CHANNEL NO. 2 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'31", long 114°31'45", in NW<sub>1</sub>SW<sub>1</sub> sec.28, T.8 S., R.22 W., Yuma County, at gaging station 0.6 mile upstream from outlet to Gila River and 4 miles east of Yuma.

PERIOD OF RECORD. -- Chemical analyses: October 1968 to September 1970.

REMARKS. -- No flow Oct. 1-3, 5-15, May 10 to June 11, Aug. 29 to Sept. 29. Unpublished miscellaneous chemical analyses for water years 1965-68 available in district office, Tucson, Ariz.

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
ОСТ. 17	0935			111	49		292		388
DEC. 18	1445		23	146	69	441	264	465	645
FEB.								455	655
16 MAR.	1120		23	153	65	448	276	400	
17	1145	41	25	153	65	470	274	450	695
APR. 20	1035	41	21	158	65	463	272	460	685
JUNE			22	148	58	446	276	455	625
15 JULY			22	140					
27 AUG.			20	151	67	477	280	460	695
21			23	145	58	439	276	470	595
DATÉ	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
OCT.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	NESS (CA+MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
OCT. 17	SOLVED SOLIDS (RESI- DUE AT 180°C)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	NESS (CA:MG)	CAR- BONATE HARD- NESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO-		ATURE
OCT. 17 DEC. 18	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA+MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
0CT. 17 DEC. 18 FEB.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA:MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE (DEG C)
9CT. 17 DEC. 18 FEB. 16 MAR.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L) 480	CAR- BONATE HARD- NESS (MG/L) 240	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 2600	(UNITS) 7.7 7.9	ATURE (DEG C)
OCT. 17 DEC. 18 FEB. 16 MAR. 17 APR.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF COMSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L) 480 650	CAR- BONATE HARD- NESS (MG/L) 240 434 424	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 2600 3160 3320	(UNITS) 7.7 7.9 7.8	ATURE (DEG C) 23.0 24.0
OCT. 17 DEC. 18 FEB. 16 MAR. 17 APR. 20 JUNE 15	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOL VED SOL IDS (TONS PER AC-FT) 2.61 2.80 2.88	NESS (CA1MG) (MG/L) 480 650 650	CAR- BONATE HARD- NESS (MG/L) 240 434 424	AD- SORP- TION RATIO  7.5 7.6 8.0	FIC COND- UCTANCE (MICRO- MHOS) 2600 3160 3320 3430	(UNITS) 7.7 7.9 7.8 7.9	ATURE (DEG C) 23.0 24.0
9CT. 17 DEC. 18 FEB. 16 MAR. 17 APR. 20 JUNE	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)  206Q 2120 2170	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)  1920 1940 2000	SOLVED SOLIDS (TONS PER AC-FT) 2.61 2.80 2.88 2.95	NESS (CA+MG) (MG/L) 480 650 650 650	CAR- BONATE HARD- NESS (MG/L) 240 434 424 426 437	AD- SORP- TION RATIO 7.5 7.6 8.0	FIC COND- UCTANCE (MICRO- MHOS) 2600 3160 3320 3430 3460	(UNITS) 7.7 7.9 7.8 7.9 7.9	ATURE (DEG C) 23.0 24.0 24.0 23.0

## 09529300 WELLTON-MOHAWK MAIN OUTLET DRAIN NEAR YUMA, ARIZ.

LOCATION.--Lat 32°44'35", long 114°26'02", in NW1NE1 sec.17, T.8 S., R.21 W., Yuma County, at gaging station 8 miles upstream from outlet to Gila River and 11 miles east of Yuma.

	TIME	DIS- SOLVED SILICA (SIO2)	DIS- SOLVED CAL- CIUM (CA)	DIS- SOLVED MAG- NE- SIUM (MG)	SODIUM PLUS POTAS- SIUM	BICAR- BONATE (HCO3)	DIS- SOLVED SULFATE (SO4)	DIS- SOLVED CHLO- RIDE (CL)
DATE		(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)
ост.								
06		22	310	133	1180	420	1050	1740
13			294	143		408		1810
20			298	128		376		1900
27			290	143		396		1860
NOV. 03		27	302	123	1250	396	1080	1790
10			282	126		370		1760
17			298	130		410		1840
24			294	128		420		1690
DEC.								
01		25	302	128	1160	404 412	1040	1700
08 1 <b>5</b>		24	262 27 <b>4</b>	152 165	1210	406	1040	1760 1760
22			298	133		404		1710
29			294	128		404		1690
JAN.								
05		24	298	121	1160	394	1010	1690
12			298	126		400		1690
19 26			306 290	126 130		410 408		1690 1610
FEB.			290	130		408		1010
02	0305	24	298	130	1140	416	1060	1640
09	0540	22	286	133	1110	414	1030	1610
16	0230	24	210	94	679	372	797	888
23	0235	24	234	91	752	388	850	988
MAR. 02		23	214	108	733	380	840	985
09	0200	23	222	108	758	388	870	1010
16	0415	24	238	108	848	352	950	1140
23		24	238	91	793	382	880	1040
30		23	238	99	793	384	880	1060
APR.								
06 13	0115	23 23	238 2 <b>6</b> 6	113 106	897 904	384 380	950 940	1210 1260
20	0140	22	254	113	892	382	940	1240
27		23	266	111	948	380	970	1320
MAY		_						
03	0215	21	230	94	737	348	850	988
11	0230	22	224	93	762	376	860	988
18 25	0430	2 <b>4</b> 23	230 234	99 9 <b>4</b>	728 770	380 384	860	962
JUNE		23	234	74	770	384	870	1010
01		24	230	104	737	384	860	988
08	0330	22	238	94	755	382	880	988
15		23	250	116	880	388	910	1240
22	1340	23	242	111	898	388	950	1210
29 JULY		23	250	108	902	392	910	1250
06		21	246	113	947	384	940	1310
13		24	218	106	911	252	940	1260
20	1325	25	226	108	897	308	963	1210
27	0235	24	254	113	915	332	960	1290
AUG.								
03 10		24 24	250 254	111 89	943	376 390	950	1300
17	0305	23	254	89 94	788 765	390 376	890 840	1040 1050
24		24	260	95	748	386	850	1040
31		21	242	96	734	388	850	988
SEP.								
07		24	222	79	702	366	820	888
14 21		24 25	226	79 99	726	384	850	900
28	0135	23	262 260	100	838 871	404 400	880 910	1160 1190
	~	23	200	100	0/1	400	710	1170

### 09529300 WELLTON-MOHAWK MAIN OUTLET DRAIN NEAR YUMA, ARIZ. -- Continued

PERIOD OF RECORD. --Chemical analyses: October 1968 to September 1970.
REMARKS. --Unpublished chemical analyses for water years 1961-68 available in district office, Tucson, Ariz.

	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (TONS PER	HARD- NESS (CA,MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO-	PH (UNITS)
DATE	(MG/L)	(MG/L)	AC-FT)	(MO/L)	(MG/L)		MHOS)	(UNI 15)
OCT.								
06		4640	6.31	1320	976	14	7250	8.0
13	~-			1320	986		7420	8.0
20				1270	962		7670	8.0
27 NOV.				1310	986		7850	8.1
03		4770	6.49	1260	936	15	7570	8.1
10		4,,,0		1220	898		7310	8.0
17				1280	944		7440	8.0
24				1260	916		7260	8.1
DEC.								
01		4560	6.20	1280	948	14	7300	8.0 8.0
08		4650	6.32	1280 1360	942 1030	15	7380 7410	8.0
15 22				1290	958		7290	8.1
29				1260	928		7270	8.2
JAN.								
05		4500	6.12	1240	917	14	7220	8.0
12				1260	932		7220	8.0
19				1280	944		72 <b>4</b> 0 6990	8.0
26 FEB.				1260	926		6970	8.1
02	4910	4500	6.68	1280	939	14	7340	8.0
09	4840	4400	6.58	1260	920	14	7250	8.0
16	3170	2880	4.31	910	605	9.8	4790	8.1
23	3420	3130	4.65	960	642	11	5110	8.0
MAR.								
02	3280	3090 3180	4.46	9 <b>80</b> 1000	668 682	10 10	5060 5180	8.0 8.0
09 16	3430 3610	3480	4.66 4.91	1040	752	11	5520	8.0
23	3500	3260	4.76	970	657	ii	5350	7.9
30	3510	3280	4.77	1000	685	11	5320	8.2
APR.								
06	3910	3620	5.32	1060	745	12	5900	8.1
13	4000	3690	5.44	1100	788	12	6080	7.9
20 27	3910 4040	3650 3830	5.32 5.49	1100 1120	787 808	12 12	5920 6130	8.0 7.9
MAY	4040	3630	3.47	1120	000	12	6130	7.7
03	3340	3090	4.54	960	674	10	5060	7.9
11	3340	3140	4.54	940	632	11	5010	8.1
18	3340	3090	4.54	980	844	10	5010	8.1
25	3380	3190	4.60	970	655	11	5090	8.0
JUNE 01	3430	3140	4.66	1000	685	10	5130	8.1
08	3390	3170	4.61	980	667	11	5120	8.1
15	3930	3610	5.34	1100	782	12	5970	8.0
22	3910	3630	5.32	1060	742	12	5890	8.0
29	3920	3640	5.33	1070	748	12	5960	8.1
JULY								
06	3960	3770	5.39	1080	765	13	6010	8.0
13 20	4000 3990	3580 3580	5.44 5.43	980 1010	77 <b>4</b> 758	13 12	5920 5940	7.9 7.9
27	3940	3720	5.36	1100	778	12	6020	7.9
AUG.	3,40	0,20	0.00		,,,		5520	,
03	4010	3770	5.45	1080	772	13	6140	7.9
10	3560	3280	4.84	1000	980	11	5360	8.0
17	3480	3210	4.73	1000	692	11	5270	8.0
24	2000	3210	4.37	1040	724	10	5270	7.9
31 SEP.	3380	3120	4.60	1000	682	10	5150	8.1
07	3190	2920	4.34	880	580	10	4780	7.9
14	3180	3000	4.32	890	575	11	4820	8.1
21	3740	3470	5.09	1060	728	11	5660	8.0
28	3880	3550	5.28	1060	732	12	5760	8.1

09529360 SOUTH GILA PUMP OUTLET CHANNEL NO. 1 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'24", long 114°33'19", in SW4NE4 sec. 30, T.8 S., R.22 W., Yuma County, at gaging station 0.2 mile upstream from outlet to Gila River and 4 miles east of Yuma.

PERIOD OF RECORD. -- Chemical analyses; October 1968 to September 1970.

REMARKS,--No flow May 5-7. Unpublished miscellaneous chemical analyses for water years 1966-68 available in district office, Tucson, Ariz.

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	
OCT.										
09			22	138	55	439	292	455	575	
17 DEC.	1100			138	62		280		555	
18	1435		21	154	72	483	290	505	685	
FEB.										
16 MAR.	1230		22	159	64	466	292	505	645	
17	1240	41	24	154	67	458	290	495	640	
APR.										
20 MAY	0915	40	20	161	63	453	288	500	630	
18	1330	23	20	123	54	438	284	490	525	
JUNE						***		<b>50</b> 0		
15 JULY			21	148	69	468	288	520	635	
27			20	153	68	469	292	510	645	
AUG. 21			20	163	60	460	292	500	635	
SEP.			20	103	60	400	272	300	633	
29	1005	37	19	146	56	445	286	510	565	
DATE	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA+MG) (MG/L,)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	
OCT.										
09		1830	2.49	570	330	8.0	3050	8.1		
17 DEC.				600	370		3120	8.0	26.0	
18		2060	2.80	680	442	8.1	3420	8.0	23.0	
FEB.										
16 MAR.	2120	2010	2.88	660	420	7.9	3380	7.9	24.0	
17	2110	1980	2.87	660	422	7.8	3370	7.9	25.0	
APR. 20	2140	1970	2.91	660	424	7.7	3380	7.9	23.0	
MAY	2140	1770	2.71	860	424	,.,	4300	,.,	23.0	
18 JUNE	1950	1790	2.65	530	297	8.3	3030	8.2	26.0	
15	2150	2000	2,92	655	419	8.0	3380	7.9		
JULY 27										
	2120	2010	2.88	660	420	7.9	3370	8.0	24.0	
AUG.										
	2120 2140 2030	2010 1980 1880	2.88 2.91 2.76	660 655 595	420 416 360	7.9 7.8 7.9	3370 3370 3120	8.0 7.9 8.1	24.0 24.0 22.5	

#### 09529440 SOUTH GILA PUMP OUTLET CHANNEL NO. 4 NEAR YUMA, ARIZ.

LOCATION. -- Lat 32°42'46", long 114°35'50", in NW4NW4 sec. 26, T.8 S., R.23 W., Yuma County, at gaging station 1.5 miles upstream from outlet to Colorado River and 1.5 miles east of Yuma.

PERIOD OF RECORD, -- Chemical analyses: October 1968 to September 1970.

REMARKS.--No flow for mapy days during fall and winter months. Unpublished miscellaneous chemical analyses for water years 1966-68 available in district office, Tucson, Ariz.

PATE	TIME	DIŞ- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIHM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVEB SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
NOV.									
19	1145			230	89		268		905
DEC. 31			21	330		• • •			
FEB.		•	21	330	140	869	356	590	1690
25	1020	22		298	135		370		1490
MAR.									
30 APR.			21	294	133	701	344	540	1390
27	1100	25	21	314	135	761	358	550	1510
	7								
MAY									
25 JUNE			20	238	91	624	292	680	979
26			20	242	87	653	296	685	1010
AUG.									- 7 - 0
21			23	372	163	913	368	580	1900
	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS)	DIS- SOLVED SOLIDS (TONS PER	HARD- NESS (CA+MG)	NON- CAR- BONATE HARD- NESS	SODIUM AD- SORP- TION RATIO	SPECI- F1C COND- UCTANCE (MICRO-	PH	TEMPER- ATURE
DATE	(MG/L)	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)	(DEG C)
NOV.									
19				940	720		4350	8.0	26.0
DEC. 31	4060	3820	5.52	1400	1110	10	6390	7.8	24.0
FEB.	4060	3620	3.32	1400	1110	10	6390	7.8	24.0
25				1300	996		6110	7.7	24.0
MAR.									
30 APR.	3570	3250	4.86	1280	998	8.5	5640	7.7	24.0
27	3740	3470	5.09	1340	1050	9.0	6030	7.7	24.0
MAY 25	2040	2700		670	720	۵ ~	4.00	7.0	OF ^
JIJNE	3060	2780	4.16	970	730	8.7	4680	7.9	25.0
26	3130	2840	4.26	960	718	9.2	4760	7.8	
AUG.									
21	4800	4130	6.53	1690	1300	9.9	7320	7.7	25.0

## 09530000 RESERVATION MAIN DRAIN NO. 4 NEAR YUMA, ARIZ.

LOCATION. -- Lat 32°44'09", long 114°37'16", in NW 1SE 1 sec. 26, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Calif., at gaging station at railroad culvert, 0.2 mile upstream from crossing of U.S. Highway 80 and 0.7 mile north of Yuma.

PERIOD OF RECORD. -- Chemical analyses: October 1968 to September 1970.

REMARKS. -- Unpublished miscellaneous chemical analyses for water years 1962-68 available in district office, Tucson, Ariz.

DATE	TIME	BIS- CHARGE (CFS)	BIS- SOLVED SILICA (SID2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/I)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	BIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	BIS- SOLVEB CHLO- RIBE (CL) (MG/L)
ост.									
07 DEC.	1425			146	51		260		238
23 JAN.	1112		18	148	51	208	264	475	228
23 FEB.	0830	36		148	49		272		228
25 MAR.		~-	19	151	47	210	268	475	222
10		~-	19	150	53	208	270	480	228
12 JULY	0930	62	17	151	49	210	264	480	228
27		~-	18	152	46	209	266	475	222
AUG. 27	1140	58	16	159	58	285	256	565	325
SEP. 29	1015	44	17	157	52	222	272	500	245
DATE	BIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (SIM OF CONSTI- THENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SOBIUM AD- SORP- TIGN RATIO	SPECI- FIC CONB- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
DATE OCT.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SHM OF CONSTI- THENTS) (MG/L)	SOLUED SOLIDS (TONS PER	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TIGN RATIO	FIC CONB- UCTANCE (MICRO- MHOS)	(UNITS)	ATURE
OCT.	SOLVED SOLIDS (RESI- DUE AT 180°C)	SOLVED SOLIDS (SUM OF CONSTI- THENTS)	SOLUED SOLIDS (TONS PER	NESS (CA+MG)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TIGN RATIO	FIC CONB- UCTANCE (MICRO- MHOS)	(UNITS) 8.0	ATURE (DEG C)
0CT. 07 DEC. 23	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SHM OF CONSTI- THENTS) (MG/L)	SOLUED SOLIDS (TONS PER	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TIGN RATIO	FIC CGNB- UCTANCE (MICRO- MHOS) 1980	(UNITS) 8.0 8.0	ATURE (DEG C) 26.0 18.0
0CT. 07 DEC. 23 JAN. 23	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SIM OF CONSTI- THENTS) (MG/L)	SOL LES SOL LES (TONS PER AC-FT)	NESS (CA.MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TIGN RATIO	FIC CONB- UCTANCE (MICRO- MHOS)	(UNITS) 8.0	ATURE (DEG C)
OCT. 07 DEC. 23 JAN. 23 FEB.	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SIM OF CONSTI- THENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L) 575	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TIGN RATIO	FIC CGNB- UCTANCE (MICRO- MHOS) 1980	(UNITS) 8.0 8.0	26.0 18.0 18.0
OCT. 07 DEC. 23 JAN. 23 FEB. 25 MAR. 10	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SIM OF CONSTI- THENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA+MG) (MG/L) 575 580 570	CAR- BONATE HARD- NESS (MG/L) 362 364	AD- SORP- TIGN RATIO	FIC CONB- UCTANCE (MICRO- MHOS) 1980 1930	(UNITS)  8.0  8.0  7.8  7.9  8.0	ATURE (DEG C)  26.0  18.0  18.0  18.0  18.0
OCT. 07 DEC. 23 JAN. 23 FEB. 25 MAR. 10 MAY	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SIM OF CONSTI- THENTS) (MG/L)	SOI VED SOI IDS (TONS PER AC-FT)	NESS (CA+MG) (MG/L) 575 580 570	CAR- BONATE HARD- NESS (MG/L) 362 364 347	AD- SORP- TIGN RATIO	F1C COND- UCTANCE (MICRO- MHOS) 1980 1930 1940	(UNITS) 8.0 8.0 7.8 7.9	26.0 18.0 18.0
OCT. 07 DEC. 23 JAN. 25 MAR. 10 MAY 12 JULY 27	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SIM OF CONSTI- THENTS) (MG/L)	SOI VED SOL IDS (TONS PER AC-FT) 1.71  1.77 1.88	NESS (CA.MG) (MG/L) 575 580 570 570 590	CAR- BONATE HARD- NESS (MG/L) 362 364 347 350	AD- SORP- TIGN RATIO 3.8	FIC CONB- UCTANCE (MICRO- MHOS) 1980 1930 1940 1950	(UNITS)  8.0  8.0  7.8  7.9  8.0  8.1  8.0	26.0 18.0 18.0 18.0 16.0 21.0
OCT. 07 DEC. 23 FEB. 25 MAY. 10 MAY. 12 JULY	SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	SOLVED SOLIDS (SIM OF CONSTI- THENTS) (MG/L) 1260  1260 1270	SOI VED SOL IDS (TONS PER AC-FT)  1.71  1.77 1.88 1.88	NESS (CA,MG) (MG/L) 575 580 570 570 590 580	CAR- BONATE HARD- NESS (MG/L) 362 364 347 350 368 364	AD- SORP- TIGN RATIO 3.8 3.7 3.8	F1C CONB- UCTANCE (MICRO- MHOS) 1980 1930 1940 1950 1990	(UNITS)  8.0  8.0  7.8  7.9  8.0  8.1	ATURE (DEG C)  26.0  18.0  18.0  18.0  16.0  21.0

## 09531700 MAIN OUTLET DRAIN EXTENSION NEAR MORELOS DAM, ARIZ.

LOCATION.--Lat 32°43'43", long 114°42'24", in NW½ sec.36, T.16 S., R.21 E., San Bernardino meridian, Yuma County, at gaging station at gate structure dividing M.O.D.E. 2 and M.O.D.E. 3, 2 miles northeast of Morelos Dam.

PERIOD OF RECORD .-- Chemical analyses: August 1969 to September 1970.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DIS-

DIS-

DATE	TIME	DIS- CHAROE (CFS)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
AUG. 1969								_	
25 SEP.	1745	59	234	98	872	9.0	324	0	985
23 OCT.	0830	288	288	131	1200	9.8	372	0	1020
20 NOV.	1530	258	248	126	1160	10	322	0	1040
20 DEC.	0915	300	234	130	1200	14	216	0	1010
19 JAN.1970	0810	265	264	126	1170	14	300	0	1020
23 FEB.	0930	295	274	125	1130	14	316	0	1000
19	0835	194	202	95	780	9.5	284	0	805
MAR. 19	0930	286	210	100	845	10	254	0	885
APR. 24	0900	307	234	111	940	9.9	282	0	870
MAY 21	0815	197	198	100	760	9.4	272	0	830
JUNE 19	0845	194	198	102	915	9.9	290	0	800
JUL.Y 24	0900	250	200	96	949	9.0	296	0	835
AUG. 20	0800	241	200	97	790	9.3	280	0	815
SEP. 24	0815	296	208	105	850	9.6	272	0	860
					***				
DATE	DIS- SOLVED CHLO- RIDE (CL; (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	
AUG.1969		(1107)	HC-F1)	(NO/L/	(110727		ninos /	(01110)	
25	1220	3660	4.98	988	722	12	5580	7.6	
SEP. 23	1780	4840	6.58	1260	954	15	7420	7.6	
OCT. 20	1760	4750	6.46	1140	876	15	7300	7.8	3
NOV. 20	1740	4580	6.23	1120	943	16	6900	7.9	,
DEC. 19	1730	4610	6.27	1180	934	15	7000	8.0	•
JAN.1970 23	1690	4520	6.15	1200	941	14	7100	7.8	3
FEB. 19	1050	3280	4.46	895	662	11	5100	7.5	i
MAR. 19	1140	3410	4.64	940	732	12	5500	7.5	i
APR. 24	1360	3920	5.33	1040	809	13	6000	8.0	
MAY 21	1040	3280	4.46	905	682	11	5000	7.6	
JUNE		3820	5.20	915	677	13	6000	7.6	
19 JULY	1290								
24 AUG.	1300	3850	5.24	895	652	14	5860	7.5	
20 SEP.	1080	3340	4.54	900	670	12	5140	7.7	
24	1170	3610	4.91	<b>95</b> 0	727	12	5540	7.7	'

### 09534000 MAIN DRAIN NEAR SAN LUIS, ARIZ.

LOCATION.--Lat 32°29'17", long 114°47'16", in SE NE sec.11, T.11 8., R.25 W., Yuma County, at gaging station at pumping plant, 0.1 mile upstream from international boundary and 0.4 mile west of San Luis.

DATE	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE~ SIUM (MG) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	BICAR- BONATE (HCO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)
OCT.								
06 13	20	142 127	55 64	336	26 <b>8</b> 2 <b>72</b>	<b>5</b> 00	405 398	
20		118	71		272		402	
27		138	55		268		395	
NOV.							***	
03 10	2.0	145 142	55 40	332	276 2 <b>68</b>	490	408 408	
17		142	52		270		378	
24		148	54		280		412	
DEC.		40-			070	485	408	
01 08	20	137 148	63 <b>54</b>	323	272 27 <b>4</b>	483	415	
15		142	60		272		412	
22		146	52		272		415	
29		148	49		276		415	
JAN. 05	22	142	55	350	274	470	445	
14	21	134	56	340	272	490	405	1640
19		142	52		268		405	
26 FEB.		138	55		278		415	
02	20	138	52	331	272	480	395	1660
09	21	145	53	324	278	485	392	1700
16	19	142	54	317	276	480	382	1750
24 Mar.		142	50		268		378	
02	19	135	49	312	242	495	358	1590
09	21	145	58	337	280	510	398	1760
16	20	143	52	336	272	510	388	1680
23 30	20 19	129 146	53 54	313 320	256 272	500 495	348 385	1560 1700
APR.	• ,	140	34	320	2/2	475	303	1700
06	20	145	55	344	276	520	405	1710
20 27	19 19	149 135	54 52	336	278 252	520 480	395 330	1730
MAY	17	135	52	286	252	480	330	1530
04	19	149	53	309	272	490	375	1800
115	21	134	57	332	248	510	395	1790
18 2 <b>5.</b>	21 20	117 147	68 57	322 338	268 280	500 520	375 400	1680 1790
JUNE	20	147	3,	330	200	320	400	1770
01	22	125	68	323	276	490	395	1700
08	20	143	55	320	270	510	375	1690
15 22	20 19	145 140	58 58	351 329	276 27 <b>4</b>	550 490	400 405	1770 1740
29	23	137	63	342	274	540	395	1760
JULY								
06	19 20	131 135	62	327	264	510	385	1680
13 20	18	145	55 54	329 319	236 268	510 510	395 375	1700 1700
27	18	139	57	331	272	500	395	1680
AUG.								
03 10	20 23	148 145	54 55	320	278	495	385	1710
17	19	145	55 57	335 319	278 280	500 510	405 375	1700 1710
24	19	147	48	324	264	490	385	1620
31	20	143	49	315	264	480	375	1630
SEP. 08	21	143	54	323	272	490	390	4.70
14	21	143	54 53	323	272	490 500	390	1670 1730
21	21	159	49	321	282	490	395	1750
28	20	156	50	338	288	510	400	1740

## 09534000 MAIN DRAIN NEAR SAN LUIS, ARIZ. -- Continued

PERIOD OF RECORD, --Chemical analyses: October 1968 to September 1970.
REMARKS.--Unpublished chemical analyses for water years 1961-68 available in district office, Tucson, Ariz.

	DIS- SOLVED SOLIDS (SUM OF CONSTI-	DIS- SOLVED SOLIDS (TONS	HARÐ- Ness	NON- CAR- BONATE HARD-	SODIUM AD- SORP- TION	SPECI- FIC COND- UCTANCE	PH
	TUENTS)	PER	(CA,MG)	NESS	RATIO	(MICRO-	
DATE	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)
OCT.							
06	1590	2.16	580	360	6.1	2410	8.1
13			580	357		2450	8.0
20			585	362		2510	8.1
27			570	350		2480	8.0
NOV.	1590	2.16	590	364	6.0	2560	8.1
10	1370	2.10	570	350		2530	8.0
17			570	348	F	2430	8.0
24			590	360		2550	8.0
DEC.							
01	1570	2.14	600	377	5.7	2540	8.0
08 15			590 600	366 377		2550 2500	8.0 8.1
22			580	357		2550	8.1
29			570	344		2520	8.1
JAN.			570	344		2020	٧
05	1620	2.20	580	356	6.3	2500	8.0
14	1580	2.23	565	342	6.2	2540	7.9
19			570	350		2510	7.9
26 FEB.			570	342		2550	8.0
02	1550	2.26	560	337	6.1	2510	8.0
09	1560	2.31	580	352	5.9	2550	8.1
16	1530	2.38	575	348	5.7	2510	8.0
24			560	340		2490	7.9
MAR.							
02	1490	2.16	540	342	5.8	2440	7.9
09 16	1600 1580	2.39 2.28	600 570	370 3 <b>4</b> 7	5.9 6.1	2590 2550	8.0 7.9
23	1490	2.12	5/U	347	5.9	2350	8.1
30	1560	2.31	585	362	5.7	2560	8.0
APR.							
06	1630	2.33	590	364	6.2	2580	8.1
20	1610	2.35	595	367	6.0	2590	8.0
27 May	1430	2.08	550	344	5.3	2310	8.0
04	1530	2.45	590	367	5.5	2530	8.0
11	1570	2.43	570	36 <b>6</b>	6.1	2620	8.0
18	1540	2.28	570	350	5.9	2520	8.1
25	1620	2.43	600	370	6.0	2650	8.0
JUNE							
01	1560 1560	2.31 2.30	590 585	364 364	5.8 5.8	2590 2570	8.1 8.1
08 15	1660	2.41	600	374	6.2	2670	8.1
22	1580	2.37	590	366	5.9	2600	8.0
29	1640	2.39	600	376	6.1	2640	8.0
JULY							
06	1570	2,28	580	364	5.9	2540	8.0
13	1560	2.31	565	372	6.0	2570	8.1
20 27	1560 1580	2.31	585 580	365 357	5.7 6.0	2530 2570	8.3 8.1
AUG.	1300	2.20	360	337	0.0	23,0	0.1
03	1560	2.33	590	362	5.7	2580	8.1
10	1600	2.31	590	362	6.0	2590	8.0
17	1560	2.33	595	366	5.7	2550	8.0
24	1540	2.20	565	348	5.9	2480	8.1
31	1510	2.22	560	344	5.8	2460	8.0
SEP. 08	1560	2.27	580	357	5.8	2560	8.0
14	1570	2.35	590	362	5.8	2570	8.1
21	1580	2.38	600	369	Γ-	2610	8.1
28	1620	2.37	595	359	6.0	2600	8.1

### 09534500 EAST MAIN CANAL WASTEWAY NEAR SAN LUIS, ARIZ.

LOCATION. --Lat 32°29'13", long 114°47'01", in NW4SW4 sec.12, T.11 S., R.25 W., Yuma County, at gaging station 0.2 mile east of Main drain pumping plant and 0.2 mile west of San Luis.
PERION OF RECORD. --Chemical analyses: October 1968 to September 1970.
REMARKS. --No flow Oct. 3, 15, 30, Nov. 8, 21, 27, Mar. 24, May 9, 10, 16, 23, 24, June 19, 26, July 17, 27. Unpublished miscellaneous chemical analyses for water years 1962-65, and continuing record chemical analyses for water years 1966-68 available in district office, Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

			DIS-	DIS-				DIS-
		DIS-	SOLVED	SOLVED			DIS-	SOLVED
	DIS-	SOLVED	MAG-	SODIUM		DIS-	SOLVED	SOLIDS
	SOLVED	CAL-	NE-	PLUS	BICAR-	SOLVED	CHLD-	(RESI-
	SILICA	CIUM	SIUM	POTAS-	BONATE	SULFATE	RIDE (CL)	DUE AT 180°C)
DATE	(\$102)	(CA)	(MG)	SIUM	(HC03)	(SQ4)	(DL) (MG/L)	(MG/L)
OCT.	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(NG/L/
06	11	95	42	192	156	390	208	
21		89	46		172	~-	215	
Nov.								
03	12	98	50	229	196	420	248	
17		100	41		142		238	
DEC.								
01	10	113	43	222	196	425	242	
15		90	52		192	~-	222	
29		118	43		198		248	
JAN.								
14	11	111	47	206	190	410	238	1190
26		11Q	44		184		248	
FEB.								
09	7.0	98	40	181	172	390	182	1120
24		89	37	~-	160		142	
MAR. 09	8.0	106	43	220		425	230	
23	3.5	87	36	169	184 144	425 385	152	1250 946
APR.	3.5	87	36	107	144	363	132	740
06	4.0	87	37	163	140	385	148	936
20	6.0	98	38	175	164	405	160	1040
MAY	0.0	, 0	36	1/3	104	403	190	1040
05	7.0	97	38	181	176	405	162	1040
18	3.0	86	39	167	132	385	162	988
JUNE				,			***	
01	6.0	95	40	188	152	400	190	1070
16	5.0	82	38	183	116	405	172	1010
29	8.0	94	40	183	158	415	168	1050
JULY								
13	11	86	38	181	134	395	172	1010
28	9.0	87	40	185	132	420	168	1020
AUG.								
10	12	97	38	186	150	400	188	1060
24	11	95	41	181	154	405	178	1060
SEP.								
10	11	90	40	207	122	430	208	1120
21	9.0	97	35	176	146	395	168	1020

nis-

	DIS-						
	SOLVED	DIS-		NON-	SODIUM	SPECI~	
	SOLIDS	SOLVED		CAR-	AD-	FIC	
	(SUM OF	SOLIDS	HARD-	BONATE	SORP-	COND-	
	CONSTI-	(TONS	NESS	HARD-	TION	UCTANCE	PH
	TUENTS	PER	(CA,MG)	NESS	RATIO	(MICRO-	
DATE	(MG/L)	AC-FT)	(MG/L)	(MG/L)		MHOS)	(UNITS)
OCT.							
06	1020	1.39	410	282	4.1	1560	8.2
21			410	269		1710	8.1
NOV.							
03	1160	1.58	450	290	4.7	1860	8.2
17			420	204		1710	8.2
DEC.							
01	1150	1.56	460	300	4.5	1840	8.2
15			440	282		1820	8.3
29			470	308		1850	8.2
JAN.							
14	1120	1.62	470	314	4.1	1810	8.0
26			455	304		1830	8.2
FEB.							
09	984	1.52	410	269	3.9	1590	8.3
24			376	245		1430	8.2
MAR.							
09	1120	1.70	440	289	2.1	1830	8.1
23	905	1.29	365	247	3.8	1440	8.3
APR.							
06	894	1.27	370	255	3.7	1430	8.2
20	964	1.41	400	266	3.8	1530	8.3
MAY							
05	978	1.41	400	256	3.9	1550	8.2
18	908	1.34	375	267	3.8	1480	8.2
JUNE							
01	995	1.46	400	276	4.1	1640	8.1
16	943	1.37	360	265	4.2	1540	8.0
29	987	1.43	400	270	4.0	1570	8.1
JULY							
13	950	1.37	370	260	4.1	1520	8.2
28	975	1.39	380	272	4.1	1560	7.9
AUG.							
10	996	1.44	400	277	4.1	1610	8.0
24	988	1.44	405	278	3.9	1570	8.1
SEP.							
10	1050	1.52	390	290	4.6	1700	7.9
21	953	1.39	385	266	3.9	1540	8.2
	,		-	200	• • •	-0.0	

09534600 MAIN DRAIN BELOW EAST MAIN CANAL WASTEWAY, AT INTERNATIONAL BOUNDARY, NEAR SAN LUIS, ARIZ.

LOCATION.--Lat 32°29'15", long 114°47'22", in SEINE; sec.11, T.11 S., R.25 W., Yuma County, at international boundary, 300 ft downstream from outlet of Bast Main Canal wasteway, 0.1 mile downstream from pumping plant, and 0.4 mile west of San Luis.

PERIOD OF RECORD. -- Chemical analyses: September 1969 to June 1970 (discontinued).

CHEMICAL ANALYSES, SEPTEMBER 1969 TO JUNE 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CD3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
SEP 1969									
23 NOV.	1030	235	146	49	323	5.9	273	0	474
21 DEC.	0930	169	111	56	342	7.4	203	0	472
19 JAN 1970	0930	139	149	49	332	6.6	282	0	462
23 FEB.	1100	13	126	44	247	6 <b>.6</b>	228	0	420
19 MAR.	0945	165	125	60	336	6.2	230	0	480
19 APR.	1130	165	110	53	347	6.1	168	0	485
24 MAY	1045	205	112	64	338	6.7	244	0	480
21 JUNE	0945	166	122	60	343	6.0	257	0	480
19	1130	166	109	55	344	6.3	215	0	455

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180°C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- Tion Ratio	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
SEP 1969								
23 NOV.	395	1600	2.18	568	344	5.9	2480	7.8
21 DEC.	424	1580	2.15	510	343	6.6	2400	8.0
19 JAN 1970	415	1620	2.20	574	343	6.0	2450	7.8
23 FEB.	295	1300	1.77	496	309	4.8	2000	8.0
19 MAR.	425	1610	2.19	558	39	6.2	2600	8.1
19 APR.	430	1550	2.11	494	356	6.8	2600	7.8
24 MAY	410	1600	2.18	544	344	6.3	2450	7.9
21 JUNE	425	1630	2.22	554	343	6.4	2640	8.0
19	430	1590	2.14	498	322	4.7	2670	7.9

## 300 ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS IN COLORADO RIVER BASIN

DATE	TIME	DIS- CHARGE (CFS)	DÍS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED POTAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
						RIVER BAS					
	4	09333500	DIRTY DEV	IL RIVER	NEAR HIT	E, UTAH (I	LAT 38 05	50 LONG	110 24 27	)	
OCT O6 APR	1515	33	16	362	55	178		9.9	141	0	1300
27 JUL	1200	20		219	70	220		8.2	257	0	810
28	1045	24				342		14		0	1720
				E	SCALANTE	RIVER BAS	IN				
	09	337500 E	SCALANTE F	RIVER NEA	R ESCALAN	TE, UTAH	(LAT 37 4	6 OO LONG	111 34 0	0)	
DEC 11	0730	18		75	35	53	-4	3.4	247	0	160
APR 15	1600	24		63	24	54		3.6	195	3	130
AUG 20	1025	45									
				LITT	LE COLORA	DO RIVER 1	BASIN				
	0940	2000 LIT	TLE COLORA	DO RIVER	NEAR CAM	ERON, ARI	Z. (LAT 35	5 55 35 L	ONG 111 3	4 00)	
OCT 28	1145	75		34	4.6	170		4.3	232	0	202
NOV 25	1155	21		34	5.1	194		4.3	258	0	148
DEC 29	1610	.50	4-	79	23	170		5.7	234	0	380
MAR 26	1130	56		17	2.8	96		2.6	155	0	37
APR 17	1335	.49		38	6.6	110		2.8	123	0	46
					VIRGIN R	IVER BASI	N				
		09413500	VIRGIN RI	VER NEAR	ST. GEOR	GF UTAH	(LAT 37 01	L OO LONG	113 40 0	0)	
0CT 01	1630	17	21	28	97	410		29	234	0	1100
MAR 18	1400	154	51	149	72	214		17	374	0	440
MAY 20	1130	28		220	80	304		20	330	0	660
AUG 26	1200	8.0		305	141	479		32	244	0	1250
						S RIVER B	ASIN				
	094	426600 B	ILL WILLIA	MS RIVER	NEAR PLAI	NET, ARIZ	. (LAT 34	15 43 LO	NG 114 01	40)	
JAN 19	1350	<10		£,		100		6.6	280	0	72
APR 20	1200	<6.0		56 43	17 24	103 105		6.8	284	0	74
JUL 20	1030	A1.0		44	23	105		7.1	280	0	72
20	1030		UTARIES AN				R DAM AND			· ·	
	0'		OLIVE LAKE							09)	
OCT											
13 JAN	1450			143	42				282 272		425
15 APR 29	1430 1150	1.2 12	13 15	137 143	43 45		150 156		288		440
JUL 17	1150	12	14	143	43		166		296		450
AUG 25	1345	20	15	143	43		155		284		435
SEP 24	1500		15	140	44		151		274		430
	2300			2.0		S AT AND 1	BELOW IMPE	ERIAL DAM			
	095	29000 NO	RTH GILA I						NG 114 31	20)	
OCT 30			18	114	48		303		250		515
JAN 22	1255	5.0		116	46				264		
APR 29			19	114	48		294		264		505
JUL 31			18	119	45		283		268		505
A ESTI	MATED.										

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L)		DIS- SOLVED SOLIDS (SUM OF CONSTIT- UENTS) (MG/L)	DIS~ SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION- RATIO	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
						RIVER BAS					
ОСТ	09	333500 D	IRTY DEVI	L RIVER I	NEAR HIT	E, UTAH, (	LAT 38 05	50 LONG	110 24 2	7)	
06 APR	140	2100	2130	2.90	187	1130	1010	2.3	2400	7.6	
27 JUL	194	1750	1650	2.24	97.8	834	623	3.3	2220	8.2	
28	200	2900		3.94	188				3150	7.9	
				ES	CALANTE	RIVER BASI	N				
	093	37500 ES	CALANTE R	IVER NEA	R ESCALA	NTE, UTAH	(LAT 37 4	6 00 LONG	3 111 34	00)	
DEC 11	64	552	511	.75	26.8	332	129	1.3	831	7.9	
APR 15	64	456	437	•62	30.0	258	94	1.5	731	8.3	
AUG 20		507		.69					800	7.9	
				LITTL	E COLORA	DO RIVER E	BASIN				
	094020	000 LITTLE	E COLORADO	D RIVER I	NEAR CAM	ERON, ARIZ	. (LAT 35	55 35 L0	ONG 111 3	4 00)	
OCT 28	72	628		.85		104	0	7.3	990	7.8	11.0
NOV 25	121	663		.90		104	0	8.2	1020	8.1	2.0
DEC 29	56	866		1.18		294	102	4.3	1230	8.2	4.0
MAR 26	78	355		.48		54	0	5.7	570	8.2	4.5
APR 17	156	492		.67		122	21	4.3	810	7.9	15.0
				,	VIRGIN R	IVER BASIN	ı				
	09	9413500 V	IRGIN RIV	ER NEAR :	ST. GEOR	GE, UTAH	LAT 37 01	00 LONG	113 40 0	0)	
OCT									3470		
01 MAR 18	560 290	2650 1390	2620 1370	3.56 1.86	122 578	1120 670	928 363	5.3 3.6	2030	7.6 8.0	
MAY 20	440	1960	1890	2.57	151	878	607	4.5	2730	7.4	
AUG 26	640	3270	2970	4.04	70.6	1340	1140	5.7	4090	8.2	
	040	32.10	2,10	,,		S RIVER BA		<b>7.</b> 1	4070	012	
	0942	6600 BIL	L WILLIAM:					15 43 LO	NG 114 01	40)	
JAN											
19 APR	97	531		•72		210	0	3.1	860	7.7	
20 JUL	96	542		•74		204	0	3.2	880	7.9	
20	95	537		.73		206	0	3.2	870	7.7	
	00/					EEN PARKER E, CALIF.				001	
ост	092	129130 UL	IVE LAKE !	DRAIN NE	AK DLTIN	E, CALIF.	(LAI 55 4	U 36 LUN	3 114 32	071	
13 JAN	138		960	1.31		530	299		1600	8.0	22.0
15 APR	128	1130	1100	1.54		520	297	2.9	1580	8.0	
29 JUL	132	1120	1080	1.52		540	304	2.9	1640	7.8	21.0
17 AUG	138	1150	1110	1.56		545	302	3.1	1660	7.9	19.0
25 SEP	128	1100	1060	1.50		530	297	2.9	1610	8.0	19.0
24	132	1100	1050	1.50		530	306	2.9	1600	8.2	19.0
	0050					S AT AND I			C 116 31	201	
ост	09529	OUU NURTI	n GILA DR.	AIN NU.	I NEAR Y	UMA ARIZ.	(LAI 32 4	∍ ∠y LUN	0 114 3I	201	
30 JAN	282		1400	1.90		480	275	6.0	2210	8.0	24.0
22 APR	282		1340	1.82		480	264		2240	8.1	18.0
29 JUL	268	1480	1380	2.01		480	264	5.8	2190	8.1	21.0
31	248	1410	1350	1.92		480	260	5.6	2110	8.1	24.0

DATE	TIME 09529	DIS- S CHARGE ( (CFS) (			-	-		SIUM (K) (MG/L) DAMCONTIN		CAR- BONATE (CQ3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)
0CT 30	~-		17	97	35		162		180		375
JAN	1110	43			37				196		
23 MAR	1110	43		103							
30 APR			16	97	38		171		186		395
30 JUL			15	102	35		174		196		395
31			17	98	33		163		188		380
	095	29200 BRUC	E CHUR	CH DRAIN I	NEAR YUMA	, ARIZ. (L	AT 32 43	46 LONG 11	4 31 07)	ı	
MAR											
31 APR			23	182	78		227		378		680
29			26	190	72		265		384		650
SEP 29	0910		27	199	69		290		436		670
		09530500	DRAIN	8-B NEAR	YUMA - AR	IZ. (LAT 3	2 44 39 I	ONG 114 41	45)		
ОСТ											
30			19	106	28		190		218		390
JAN 20	1100	1.2	17	92	31		181		212		365
MAY 04			16	87	36		194		184		410
JUL 27			20	105	25		194		184		410
AUG											860
27 SEP	1400	1.9	12	131	45		568		220		
29	1000	1.9	18	97	31		187		202		395

DATE	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	SOLIDS (RESI- ( DUE AT C 180 C) (MG/L)	DIS- SOLVED SOLIDS SUM OF ONSTIT- UENTS) (MG/L) ONS AND	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DAY	HARD- NESS (CA,MG) (MG/L) D BELOW I	NON- CAR- BONATE HARD- NESS (MG/L)	RATIO	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
	0952	9050 NORTH	GILA DR	AIN NO. 3	NEAR YUM	A, ARIZ.	(LAT 32 44	28 LONG	114 26	39)	
OCT 30	142		918	1.25		385	238	3.6	1430	8.0	24.0
JAN 23	150		906	1.23		410	250		1510	8.2	16.0
MAR 30	148	1010	958	1.37		400	248	3.7	1490	8.2	22.0
APR 30	146	990	965	1.35		400	240	3.8	1490	8.1	19.0
31	132	984	917	1.34		380	226	3.6	1450	8.1	28.0
	09	529200 BRU	CE CHURC	H DRAIN N	EAR YUMA,	ARIZ. (L	AT 32 43 4	6 LONG 1	14 31 07	)	
MAR											
31 APR	255	1820	1680	2.48		775	465	4.3	2490	8.0	21.0
29 SEP	252	1780	1650	2.42		770	455	4.2	2460	7.9	18.0
29	245	1840	1720	2.50		780	422	4.5	2540	8.0	20.0
		09530500	DRAIN	8-B NEAR	YUMA, ARI	Z. (LAT 3	2 44 39 LC	ONG 114 4	1 45)		
OCT 30	148		990	1.35		380	201	4.2	1510	8.2	23.0
JAN 20	138	984	930	1.34		355	181	4.2	1450	8.2	16.0
MAY 04	148	1030	983	1.40		365	214	4.4	1560	8.7	
JUL 27	148	1020	994	1.39		365	214	4.4	1540	8.2	
AUG 27	475	2360	2200	3.21		510	330	11	3460	8.1	34.0
SEP 2 <b>9</b>	142	1000	971	1.36		370	204	4.2	1490	8.3	24.0

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SD4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
	00030	E00 W1111	IAMS FORK	DELOU UT				(1 AT 40	02 07 108	IC 106 12	171	
JUL 1969	09038	JOO WILL	AMS FURK	DELOW WIL	LIAMS FOR	K KESEKVI	JIK, COLO.	(LA) 40	02 07 200	100 12	117	
09 OCT		14		13	2.9	2.9		1.5	53		4.2	1.2
21 JAN 1970		260		13	2,9	2.5		1.4	57		1.8	1.7
23 APR		7.0		16	2.6	2.9		1.6	66		3.0	1.8
22		8.0		17	2.2	2.9		1.7	68		4.8	1.3
	_					IVER BASI						
	04	9057700 1	BLUE RIVER	AT MOUTH	, NEAR KR	EMMLING,	COLO. (LA	T 40 01 5	55 LUNG 10	16 23 091		
JUL 1969 09 OCT		1640	*-	21	4.5	3.5		1.6	61		24	1.4
21 JAN 1970		807		22	4.0	3.6		1.5	69		22	1.9
23 APR		620		25	4.3	4.1		1.7	77		26	2.0
22		789		28	5.4	5.0		1.9	90		30	1.1
						RIVER BAS						
	(	09070400	EAGLE RIV	ER AT MOU	TH, NEAR	DOTSERO,	COLO. (LA	Т 39 38 3	86 LONG 10	07 03 20)		
AUG 1969 26		251		112	22	41		2.7	189		215	54
NOV 20		201		125	28	50		2.5	208		245	73
FEB 1970 25 MAY		170		105	21	40		2.7	170		219	56
21		3510		32	4.4	3.9		1.5	85	44.4	27	4.0
					COLORADO	RIVER MAI	N STEM					
		0907050	OO COLORA	DO RIVER	NEAR DOTS	ERO, COLO	. (LAT 39	38 40 LC	NG 107 04	40)		
NOV 1969 20		1120	9.7	52	13	26		2.2	134		92	31
FEB 1970 25		1220	7.6	42	8.9	19			115		71	22
MAY 21 SEP		13000	9.1	24	6.8	5.4		1.7	88		23	2.1
23		1540	11	53	11	20		1.9	124		77	21
					PLATEA	U CREEK I	BASIN					
		09105	5000 PLAT	EAU CREEK	NEAR CAM	EO, COLO.	(LAT 39	11 00 LOM	IG 108 16	10)		
NOV 1969 21		130	26	48	39	69		46	394		95	9.7
FEB 1970 11		114	20	58	28	60		5.1	362		88	11
JUN 01 AUG		710	13	28	9.2	16		2.1	152		21	2.9
31		124	33	52	37	75		8.6	437		86	9.0
					UNCOMPAH	GRE RIVER	BASIN					
		09149	500 UNCOM	PAHGRE RI	VER AT DE	LTA, COLO	. (LAT 38	44 30 L0	ING 108 04	50)		
NOV 1969 25		225	13	180	88	172		4.2	210		925	16
FEB 1970 09		130	11	216	88	184		3.2	274		1000	8.0
MAY 18		1190	11	81	22	39		2.8	138		254	6.5
AUĠ 25		438	17	191	44	104		3.9	243		662	9.7
					SAN JUA	N RIVER I	BASIN					
		0934	46000 NAV	AJO RIVER	AT EDITH	, COLO.	LAT 37 00	10 LONG	106 54 25	5)		
OCT 1969 14		95	22	28	5.8	9.2		1.7	77		48	1.0
JAN 1970 12		42	24	28	5.6	9.6		1.6	77		48	.8
APR 13		77	21	30	7.0	9.9		1.6	87		48	.6
JUN 08		551	19	17	3.6	5.6		1.1	57		20	•2
JUL 13		104	21	20	4.3	6.3		1.3	66		25	.6

# ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN COLORADO RIVER BASIN

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SDLVED NITRATE (ND3) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NDN- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION- RATIO	SPE- CIFIC CDN- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER - ATURE (DEG C)
						AMS FORK						
	09038	500 WILL	IAMS FORK	BELOW WIL	LIAMS FO	RK RESER	VOIR, COLO.	(LAT 40	02 07 LD	NG 106 12	17)	
JUL 1969 09				67	•09	2.5	44	1	•2	97	7.2	10.0
21				66	•09	46.3	44	0	•2	98	6.9	9.0
JAN 1970 23				72	.10	1.4	59	0	•2	111	7.5	3.0
APR 22				83	.11	1.8	51	0	•2	119	6.6	4.0
					BLUE	RIVER B	ASIN					
	0	9057700	BLUE RIVER	AT MOUTH	, NEAR K	REMMLING	, COLO. (LA	T 40 01 5	55 LONG 1	.06 23 09)		
JUL 1969 09				98	.13	434	70	20	•2	156	7.3	10.0
OCT 21				96	.13	209	72	16	.2	164	7.1	9.5
JAN 1970 23				106	.14	177	80	17	.2	182	7.6	6.0
APR 22				134	.18	285	93	19	.2	217	6.8	6.0
						RIVER B					0.0	•••
	4	09070400	EAGLE RIV	ER AT MOL			COLD. (LAT :	39 38 36	LDNG 107	03 20)		
AUG 1969												
26 NDV				576	.78	390	372	218	.9	859	7.4	18.0
20 FEB 1970				688	.94	373	428	257	1.1	1000	7.2	0.0
25 MAY				556	.76	255	349	210	•9	830	7.7	4.0
21				130	.18	1230	97	27	•2	203	7.6	7.5
		000705		DO 011150	COLORADO							
NOV 1969		090705	OU CULUKA	DO KINEK	NEAK DUI:	SERU, CU	LD. (LAT 39	38 40 LC	MG 107 U	4 40)		
20A FEB 1970	.2	.3	0	308	•42	931	184	74	.8	477	7.7	•5
25A MAY		.3		224	.30	738	142	48	-7	367	7.9	4.0
21B SEP	. 3	•9	4	166	.23	5830	87	15	.3	196	6.9	11.0
23A	• 4	•2	50	271	.37	1130	177	75	.7	426	7.7	11.0
					PLATE	AU CREEK	BASIN					
		0910	5000 PLAT	EAU CREEK	NEAR CAI	MED, COL	D. (LAT 39	11 00 LDN	IG 108 16	10)		
NDV 1969 21C	.4	1.2	0	478	.65	168	281	0	1.8	753	7.9	1.5
FEB1970 11D	.6	2.3	9	448	.61	138	260	0	1.6	706	7.7	2.0
JUN 01E	.3	.8	0	179	.24	343	109	0	.7	273	7.9	13.5
AUG 31F	.8	1.2	90	546	.74	183	282	0	1.9	833	7.7	18.0
					UNCOMPA	HGRE RIV	ER BASIN					
		09149	500 UNCOM	PAHGRE RI	VER AT D	ELTA, CO	LO. (LAT 38	44 30 LC	NG 108 0	4 50)		
NOV 1969 25G	.7	13	0	1640	2.07	996	810	638	2.6	1900	7.9	2.5
FEB 1970 09G	•7	14	0	1870	2.26	656	900	675	2.7	2140	7.6	1.5
MAY 18H	•6	4.8	0	544	.74	1750	292	179	1.0	728	7.8	13.0
AUG 25D	•4	7.2	0	1230	1.58	1460	656	457	1.8	1520	8.0	18.0
					SAN JU	AN RIVER	BASIN					
		093	46000 NAV	AJD RIVER	AT EDIT	H, COLO.	(LAT 37 00	10 LONG	106 54 2	5)		
OCT 1969	_	_										
14 JAN 1970	•2	.1		160	.22	41	90	27	.4	226	7.7	6.0
12 APR 13	.2	•0		166	.23	19	93	30	.4	228	8.0 7.8	0.0 6.0
JUN 08	.2	•0		156 94	.21	32 140	9 <b>9</b> 55	28 8	.4	242 138	7.5	6.5
JUL 13	.3	•0	.0		.15	32	66	12	.3	162	7.5	12.5
A INCLU	DES 0.00	MG/L DF	ORTHO PHOS	PHATE AS	PD4.	E I	NCLUDES 0.0	5 MG/L DF	ORTHO P	HOSPHATE	AS PO4.	
C INCLU	DES 0.24	MG/L DF	ORTHO PHOS ORTHO PHOS ORTHO PHOS	PHATE AS	PD4.	G I	NCLUDES 5.0 NCLUDES 0.00 NCLUDES 0.00	2 MG/L OF	ORTHO P	HOSPHATE .	AS PO4.	

I ESTIMATED.

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN COLORADO RIVER BASIN

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)
				SAN	JUAN RI	ER BASIN-	-CONTINUE	ĒD				
		0934640	O SAN JU	IAN RIVER	NEAR CARE	RACAS, COL	.O. (LAT 3	37 00 47 1	ONG 107	18 39)		
OCT 1969												
NOV		420	19	24	5.9	14		1.7	85		46	1.8
17 DEC		310	10	31	9.2	21		2.3	89		77	2.0
09 JAN 1970		154	21	32	7.9	21		2.2	101		70	2.0
13 FEB		220	21	34	7.3	26		3.0	102		77	3.6
09 MAR		160	16	34	8.1	27		2.7	106		82	3.8
09 APR		207	16	44	13.0	30		3.3	127		114	3.8
13 MAY		395	18	30	7.7	17		2.1	102		54	1.8
11 JUN		1460	16	15	2.9	6.9		.8	60		17	•2
08 JUL		1510	16	20	3.4	6.8		1.2	64		20	.4
13		415	16	22	4.6	9.9		1.8	80		28	1.1
		0936795	O CHACO	RIVER NEA	R WATERFL	.OW, N. ME	X. (LAT 3	36 44 10 L	ONG 108	33 50)		
OCT 1969 08	1430	I 5.0	18	180	. 39		353		338	0	964	68
APR 1970	1500	1 8.0	3.2	_	124				9	11	1820	168
27	1500			260			484				1020	100
****		09371	.000 MANC	O2 KIVEK	NEAR TOWA	COC, COLO.	(LAI 37	01 39 LU	NG 108 44	211		
AUG 1969 27		11		192	107	113		5.0	182		930	16
DEC 19		35		160	97	103		2.6	238		785	15
MAR 1970 31		20		210	119	129		3.2	254		1040	30
MAY 13		46		96	41	41		3.3	170		342	7.3
SEP 10		42		156	72	67		4.1	187		642	10
	09	372000 M	ICELMO CRE	EK NEAR O	OLORADO-U	JTAH STATE	LINE (LA	T 37 19 2	7 LONG 10	9 00 54)		
AUG 1969												
27 SEP		49		240	156	157		5.3	292		1200	38
10 DEC		133		240	126	120		5.1	239		1060	30
19 MAR 1970		45		337	277	273		4.3	338		2180	54
31 May		51		369	253	203		4.8	420		1940	58
13		14		269	197	241		8.6	257		1630	48
						RIVER BAS						
		09480500	SANTA C	RUZ RIVEF	NEAR NO	SALES, ARI	Z. (LAT 3	31 20 40 1	_ONG 110 5	51 05)		
NOV 1969 07	1200	5.5		51	5.6	31		3.4	212	0	27	10
SEP 1970 23	1050	22		45	5.3	21		3.5	182	0	25	8.5

## ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES IN COLORADO RIVER BASIN

CHEMICAL ANALYSES, WATER YEARS OCTOBER 1968 TO SEPTEMBER 1970

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	(NO3)	BORON (B) (UG/L)	DIS- SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION- RATIO	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
				SAN	JUAN RI	VER BASIN	continu	ED				
		09346400	SAN JU	JAN RIVER	NEAR CAR	RACAS, CO	LO. (LAT	37 00 47	LONG 107	18 39)		
OCT 1969 14	•2	•3		156	•21	177	84	14	•7	237	8.0	9.0
NOV 17	•2	.0		200	•27	167	114	41	.9	310	7.8	5.0
DEC 09	.0	.5		215	-29	89	112	29	.9	325	7.6	0.0
JAN 1970	.3	.0		231	.31	137	114	27	1.1	339	8.3	0.0
9	.3	•0		233	•32	101	119	32	1.1	356	8.0	.5
MAR 09	.3	.6		298	•40	166	160	56	1.0	446	7.6	8.5
APR 13	.3	•2	100	184	.25	196	98	14	.7	278	7.9	6.5
MAY 11	.2	.6		98	.13	386	48	0	•4	137	7.6	12.0
JUN 08	.2	.4		101	.14	411	56	4	.4	146	7.7	11.5
JUL 13	•3	.1	20	124	.17	139	74	8	.5	193	7.1	20.0
		09367950	CHACO	RIVER NEA	R WATERF	LOW, N. M	EX. (LAT	86 44 10	LONG 108	33 50)		
OCT 1969												
08J APR 1970		•2		K1790			610	333	6.2	2480	7.4	18.0
27L	.6	65		K2940			1160	1130	6.2	3660	8.9	19.0
		093710	00 MANC	OS RIVER	NEAR TOW.	AOC, COLO	. (LAT 37	01 39 LO	NG 108 44	27)		
AUG 1969 27				1570	1.99	49.6		761	1.6	1830	8.4	21.0
DEC 19				1360	1.74	129	800	597	1.6	1590	8.4	3.0
MAR 1970 31				1760	2.26	99.3	1020	807	1.8	1970	8.0	7.0
MAY 13				677	.92	85.5	408	269	.9	896	7.5	13.0
SEP 10				1140	1.55	131	688	516	1.1	1370	8.8	16.0
	0	9372000 MC	ELMO CRE	EK NEAR C	OLORADO-	UTAH STAT	E LINE (LA	AT 37 19	27 LONG 1	.09 00 54)		
AUG 1969												
27 SEP				2180	2.64	294		1000	1.9	2390	8.3	25.0
10 DEC				1100	2.31	610	1120	924	1.6	2100	8.1	19.0
19 MAR 1970				3350	4.52	414	1980	1650	2.7	3370	8.4	2.0
31 MAY				3220	4.12	444	1960	1620	2.0	3340	7.9	4.0
13				2700	3.43	106	1480	1270	2.7	2910	7.7	19.0
					GILA	RIVER BA	SIN					
		09480500	SANTA C	RUZ RIVER	NEAR NO	GALES, AR	IZ. (LAT	31 20 40	LONG 110	51 05)		
NOV 1969 07				271	.37		150	0	1.1	407	7.9	20.0
SEP 1970 23				249	.34		134	0	.8	375	7.7	
43				447	• 54		134	U	••	313		_

J INCLUDES 0.00 MG/L OF DISSOLVED NITRATE AS N. K SUM OF CONSTITUENTS.
L INCLUDES 15 MG/L OF DISSOLVED NITRATE AS N.

300	ANALYSES OF SAMPLES	COLLECTED AT MISCELLANEOUS SITES IN COLORADO RIVER BASIN	
	LYSIS: B, BOTTOM WITHDRA	S AND PARTICLE-SIZE DISTRIBUTION. WATER YEARS OCTOBER 1968 TO SEPTEMI NWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, ACCUMULATION TUBE; N IN DISTILLED WATER)	
DATE TIME	WATER TEM- PERA- CONCEN- TURE DISCHARGE TRATION (°C) (CSF) (MG/L)	PARTICLE SIZE SUSPENDED SEDIMENT DISCHARGE (TONS/DAY) .002 .004 .008 .016 .031 .062 .125 .250 .500 1.00 2.00	METHOD OF Analy- Sis
c	9220000 EAST FORK OF SMIT	GREEN RIVER BASIN TH FORK NEAR ROBERTSON, WYO. (LAT 41 03 15 LONG 110 23 52)	

				CDET	N DT	n n										
					N RIVE											
	092200	00 EAST FORK	OF SMITH	FORK NEAR	ROBERI	SON,	WYO.	{LAT	41 0	3 15	LONG :	110 2	3 52)			
JUN 4 1969	1415 12.0	102	10	2.8												
	092205	00 WEST FORK	OF SMITH	FORK NEAR	ROBER	TSON	, WYO	(LA	T 41	01 20	LONG	110	28 43	)		
JUN 4 1969	1205 11.0	31.8	4	.3												
														٥,		
		OO HAMS FORK			GEK SI	ATIU	4, WY	J. (L.	41 42	06 4	O LUN	, 110	42 4	0,		
JUN 4 1969	1350 12.0	344	22	20												
		09223500 H	AMS FORK	NEAR FRONT	IER, W	YO.	LAT 4	41 51	26 L	ONG 1	10 33	45)				
JUN 4 1969	1130 14.0	208	8	4.5												
		09226000 HE	NRYS FORK	NEAR LONE	TREF.	wyn.	( LAT	41 0	0 23	LONG	110 1	6 13)				
	. <b></b>				.   / L L J	,,,,,	, ,	,,,								
JUN 4 1969	1745 13.0	94.4	45	11												
		09228500 BU	IRNT FORK	NEAR BURNT	FORK,	WYD.	(LAT	40 5	50	LONG	110 D	4 20)				
JUN 4 1969	2030 13.0	86.3	10	2.3					~-							
				SAN JU	AN RIV	ER B	ASIN									
	00	341200 WOLF	COPER NE					AT 2	7 24	47 10	NC 10	. 53	001			
					PKINGS	, cu		LAIS	. 20	47 LU	40 10	5 25	007			
MAY 6 1970 MAY 19	1100 6.0	35 135	35 44	3.3 16					~-							
MAY 20			86	38												
JUN 3			12	3.8												
JUN 17			6	1.5												
JUL 8			10	.73					~-							
	0900 12.0		4	.10					~-							
SEP 2			5	.11					~-							
	09347200	MIDDLE FORK	PIEDRA RI	VER NEAR P	AGOSA	SPRI	NGS.	coLo.	(LAT	37 2	9 12	LONG	107 0	9 46)		
MAY 6 1970	1530 6-0	57	41	6.3					~-							
MAY 20			24	9.7												
MAY 20			88	47					~-							
JUN 3																
		138		2.2												
			6	2.2												
JUN 17	1350 11.0	114	6	1.8				<del></del>								
JUN 17 JUN 8	1350 11.0 1300 14.0	114 37	6 12	1.8 1.2									 			
JUN 17 JUN 8 AUG 5	1350 11.0 1300 14.0 1200 17.0	114 37 20	6 12 8	1.8 1.2 .43								=======================================	=======================================	==	=======================================	
JUN 17 JUN 8 AUG 5	1350 11.0 1300 14.0 1200 17.0 1200 16.0	114 37 20 28	12 8 2	1.8 1.2 .43 .15									=======================================		===	
JUN 17 JUN 8 AUG 5 SEP 2	1350 11.0 1300 14.0 1200 17.0 1200 16.0	114 37 20 28 9357500 ANIM	12 8 2	1.8 1.2 .43 .15					50 0	   0 LON		36 0	     			
JUN 17 JUN 8 AUG 5 SEP 2	1350 11.0 1300 14.0 1200 17.0 1200 16.0	114 37 20 28 9357500 ANIM	6 12 8 2 IAS RIVER 322	1.8 1.2 .43 .15 AT HGWARDS	   VILLE,	   cold			50 0	62	   G 107 86	99	100			VPWC
JUN 17 JUN 8 AUG 5 SEP 2	1350 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0	114 37 20 28 9357500 ANIM	6 12 8 2 345 RIVER 322 30	1.8 1.2 .43 .15 AT HGWARDS 170 34	   VILLE,	   cold	    	  AT 37		62	  G 107 86		100			VPWC
JUN 17 JUN 8 AUG 5 SEP 2 MAY 7 1970 MAY 20 MAY 20	1350 11.0 1300 14.0 1200 17.0 1200 16.0 1530 4.0 1100 4.0 1835 4.0	114 37 20 28 9357500 ANIM 196 425 552	6 12 8 2 IAS RIVER 322 30 113	1.8 1.2 .43 .15 AT HGWARDS 170 34 168	15	  cold	. (L)	  AT 37		62	  G 107 86 	99	100			VPWC
JUN 17 JUN 8 AUG 5 SEP 2 MAY 7 1970 MAY 20 MAY 20 JUN 4	1350 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0 1835 4.0 1200 5.0	114 37 20 28 9357500 ANIM 1 196 425 552 485	6 12 8 2 2 30 113 54	1.8 1.2 .43 .15 AT HOWARDS 170 34 168 71	15	17	    	  AT 37		62  	G 107	99	100			VPWC
JUN 17 JUN 8 AUG 5 SEP 2 MAY 7 1970 MAY 20 MAY 20 JUN 4 JUN 17	1350 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0 1835 4.0 1200 5.0 1720 10.0	114 37 20 28 19357500 ANIM 1 196 425 552 485 485	6 12 8 2 2 3AS RIVER 322 30 113 54 36	1.8 1.2 .43 .15 AT HGWARDS 170 34 168 71 40	15	17	. (L)	AT 37	=======================================	62  	6 107 86	99   	100			VPWC
JUN 17 JUN 8 AUG 5 SEP 2 MAY 7 1970 MAY 20 MAY 20 JUN 4 JUN 17 JUL 9	1350 11.0 1300 14.0 1200 16.0 1200 16.0 0 1530 4.0 1100 4.0 1835 4.0 1200 5.0 1720 10.0 1410 12.0	114 37 20 28 9357500 ANIM 1 196 4 425 5 552 4 485 4 415 2 238	6 12 8 2 34 32 30 113 54 36 4	1.8 1.2 .43 .15 AT HGWARDS 170 34 168 71 40 2.6	15 	17 	. (L)	AT 37		62	6 107 86	99	100			VPWC
JUN 17JUN 8SEP 2SEP 2	1350 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0 1200 5.0 1720 10.0 1410 12.0	114 37 20 28 9357500 ANIM 196 425 552 552 485 415 238 69	6 12 8 2 34 32 30 113 54 36 4 2	1.8 1.2 .43 .15 AT HGWARDS 170 34 168 71 40 2.6 .37	15	17 	. (L)	AT 37	=======================================	62  	6 107 86	99   	100			VPWC
JUN 17JUN 8SEP 2SEP 2	1350 11.0 1300 14.0 1200 16.0 1200 16.0 0 1530 4.0 1100 4.0 1835 4.0 1200 5.0 1720 10.0 1410 12.0	114 37 20 28 9357500 ANIM 196 425 552 552 485 415 238 69	6 12 8 2 34 32 30 113 54 36 4	1.8 1.2 .43 .15 AT HGWARDS 170 34 168 71 40 2.6	15 	17 	. (L)	AT 37	=======================================	62	6 107 86	99   	100			VPWC
JUN 17JUN 8SEP 2SEP 2	1550 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0 1835 4.0 1200 5.0 1720 10.0 1410 12.0 1010 11.0	114 37 20 28 9357500 ANIM 196 425 552 552 485 415 238 69	6 12 8 2 322 30 113 54 36 4 2	1.8 1.2 .43 .15 AT HOWARDS 170 34 168 71 40 2.6 .37 2.0	15        	17 	(L)	AT 37		62	6 107 86	99	100			VPWC
JUN 17JUN 8SEP 2SEP 2	1550 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0 1200 5.0 1720 10.0 1410 12.0 1010 11.0	114 37 20 28 19357500 ANIM 1 196 1 425 1 552 1 485 1 415 238 69 69	6 12 8 2 322 30 113 54 36 4 2	1.8 1.2 .43 .15 AT HOWARDS 170 34 168 71 40 2.6 .37 2.0	15        	17 	(L)	AT 37		62	6 107 86	99	100			VPWC
JUN 17. JUN 8. AUG 5. SEP 2.  MAY 7 1970 MAY 20. MAY 20. JUN 4. JUN 17. JUL 9. SEP 4.	1350 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0 1200 5.0 1720 10.0 1410 12.0 1010 11.0 09	114 37 20 28 19357500 ANIM 196 425 485 485 485 485 485 69 69	6 12 8 2 30 113 54 36 4 2 11	1.8 1.2 .43 .15 AT HOWARDS 170 34 168 71 40 2.6 .37 2.0	15	17 	(L)	AT 37		62       4 LON	G 107	99	100			
JUN 17. JUN 8 AUG 5. SEP 2  MAY 7 1970 MAY 20. MAY 20. JUN 4. JUN 17. JUL 9. AUG 3. SEP 4  MAY 7 1969 MAY 7 1969 MAY 7 1969	1350 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0 1200 5.0 1720 10.0 1410 12.0 1015 8.0 09	114 37 20 28 19357500 ANIP 196 425 552 485 415 238 69 69 69 69 69 69	6 12 8 2 VAS RIVER 322 30 113 54 36 4 2 11 AL CREEK 92	1.8 1.2 .43 .15 AT HGWARDS 170 34 168 71 40 2.6 .37 2.0 ABOVE SILV	   VILLE, 15             	17 	(L)	AT 37		62       4 LON	G 107	99     43 3 98	100			VPWC
JUN 17. JUN 8 AUG 5. SEP 2  MAY 7 1970 MAY 20 MAY 20 JUN 4 JUN 17. JUL 9 AUG 3 SEP 4  MAY 7 1969 MAY 20 MAY 20	1530 11.0 1200 14.0 1200 16.0 0 1530 4.0 1100 4.0 1835 4.0 1200 5.0 1410 12.0 1010 11.0 1015 8.0 09	114 37 20 28 19357500 ANIM 196 425 485 485 485 485 485 485 485 485 485 48	6 12 8 2 30 322 30 113 54 36 4 2 11 34 4 2 11	1.8 1.2 .43 .15 AT HGWARDS 170 34 168 71 40 2.6 .37 2.0 ABOVE SILV 10 12	15	17	(L)	AT 37		62       4 LON	G 107 86       G 107 90 83	99       43 3 98 90	100			VPWC VPWC
JUN 17. JUN 8 AUG 5. SEP 2  MAY 7 1970 MAY 20. MAY 20. JUN 4. JUN 17. JUL 9. AUG 3. SEP 4  MAY 7 1969 MAY 20. MAY 20. JUN 4. JUN 4. JUN 4. JUN 4.	1350 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0 1200 5.0 1720 10.0 1610 12.0 1010 11.0 1015 8.0 09 1100 4.0 1315 4.0 1315 4.0	114 37 20 28 19357500 ANIP 196 425 552 485 415 238 69 69 69 69 69 110 160 108	6 12 2 2 32 30 113 54 36 4 2 11 AL CREEK 92 42 181	1.8 1.2 .43 .15 AT HOWARDS 170 34 168 71 40 2.6 .37 2.0 ABOVE SILV	15 	17	(L)	AT 37		62       4 LON	G 107  86	99      43 3 98 90 80	100     1) 100 98 88			VPWC VPWC
JUN 17. JUN 8 8. AUG 5. SEP 2 MAY 7 1970 MAY 20. JUN 17. JUN 17. JUN 29. AUG 3. SEP 4 MAY 7 1969 MAY 20. JUN 4. JUN 17.	1350 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0 1200 5.0 1720 10.0 1010 11.0 1015 8.0 1010 4.0 1315 4.0 1315 4.0 1315 4.0 1545 4.0	114 37 20 28 19357500 ANIM 196 425 425 485 415 238 69 358900 MINER 110 160 160 183	6 12 8 2 2 30 113 54 4 2 11 36 4 2 11 36 4 2 11 11 4 12 32 30 113 54 4 2 11 11 11 11 11 11 11 11 11 11 11 11 1	1.8 1.2 .43 .15 AT HOWARDS 170 34 168 71 40 2.6 .37 2.0 ABOVE SILV 10 12 78 15 9.9	15	17	(L)	AT 37		62       4 LON	G 107  86	99      43 3 98 90 80	100     1) 100 98 88		100	VPWC VPWC
JUN 17. JUN 8 AUG 5. SEP 2  MAY 7 1970 MAY 20. JUN 4. JUN 17. JUL 9 AUG 3 MAY 20. MAY 20. JUN 4. JUN 17. JUL 9 JUN 17. JUN 4. JUN 17. JUN 19.	1350 11.0 1300 14.0 1200 17.0 1200 16.0  0  1530 4.0 1100 4.0 1100 5.0 1100 5.0 1100 10.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0 1101 11.0	114 37 20 28 19357500 ANIM 196 425 552 485 415 238 69 69 69 100 1100 1100 1100 1100 1100 1	6 12 8 2 2 30 113 54 4 2 1 1:AL CREEK 92 42 181 53 44 10	1.8 1.2 .43 .15 AT HGWARDS 170 34 168 71 40 2.6 .37 2.0 ABOVE SILV 10 12 78 15	15 	17	(L)	AT 37		62       4 LON	G 107  86	99      43 3 98 90 80	100     1) 100 98 88		100	VPWC VPWC
JUN 17. JUN 8 AUG 5. SEP 2 MAY 7 1970 MAY 20. JUN 17. JUN 18.	1350 11.0 1300 14.0 1200 17.0 1200 16.0 0 1530 4.0 1100 4.0 1200 5.0 1720 10.0 1010 11.0 1015 8.0 1010 4.0 1315 4.0 1315 4.0 1315 4.0 1545 4.0	114 17 20 28 19357500 ANIM 196 425 485 415 238 69 3358900 MINER 110 110 110 108 83 57 14	6 12 8 2 2 30 113 54 4 2 11 36 4 2 11 36 4 2 11 11 4 12 32 30 113 54 4 2 11 11 11 11 11 11 11 11 11 11 11 11 1	1.8 1.2 .43 .15 AT HOWARDS 170 34 168 71 40 2.6 .37 2.0 ABOVE SILV 10 12 78 15 9.9	15	17 	(L)	AT 37		62       4 LON	G 107 86	99      43 3 98 90 80	100     1) 100 98 88		100	VPWC VPWC

GILA RIVER BASIN
09480500 SANTA CRUZ RIVER NEAR NOGALES, ARIZ. (LAT 31 20 40 LONG 110 52 05)

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4.6 6.2 3.4 85 12 6.6

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OCT 2 1969
DEC 22....
MAR 24 1970
AUG 11....
SEP 23....
SEP 26....

.39 .20 .33 199 1.4

### PART 10. THE GREAT BASIN

#### BEAR RIVER BASIN

## 10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UTAH

LOCATION.---Lat 41°26'05", long 111°01'00", in NW\| NW\| sec.29, T.17 N., R.120 W., Uinta County, Wyo., at gaging. station 9.3 miles upstream from Woodruff Narrows Dam and 10 miles southeast of Woodruff.

DRAINAGE AREA. -- 780 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: October 1968 to September 1970.

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SID2) (MG/L)	DIS- SQL VED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SI UM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	PIS# SOLVED FLUG- RIDE {F} (MG/L}
NO V.									_			_
18	1245	62	7.3	49	31	13	1.9	262	9	14	20	•5
DEC. 15	1600	62	6.0	55	15	8.8	1.4	232	0	6.6	17	•2
JAN. 21	1045	75	7.6	54	23	11	1.6	231	6	7.4	28	.3
F68. 24	1800	90	5.6	54	13	10	1.2	180	18	12	11	•2
APR. 01	1030	68	6. 8	59	22	15	2.1	232	16	26	15	<b>,</b> 3
MAY 06	1100	733	14	53	20	10	2.3	239	0	20	8.1	•2
JUNE 05	15 30	1230	5.4	26	6.9	3.2	1.1	109	0	6+2	.7	-1
08	1030	99	9.7	46	15	11	1.9	220	ð	6.6	10	.3
SEP. 14		35	11	63	25	22	4.4	290	6	31	19	•2

DATE	NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	SOL VED SOL IDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TDNS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TIGN RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
NOV. 18	•2	50	275	.37	45.2	250	20	.4	483	8.3	0.0
DEC.	• •	,0	213		49.2	230	20	• •	403	0.3	0.0
15	.7	20	225	-29	35.8	198	8	.3	395	8.2	0.0
JAN.											
21	•0	90	252	.33	49.8	228	28	.3	430	8.3	0.0
FEB - 24	.5	0	214	-30	53.0	190	12	.3	381	8.6	0.0
APR.		_									•
01	.4	20	279	. 39	52.9	240	20	.4	502	8.5	0.5
MAY 86	1.4	130	246		4.76	212	17	•3	419	7.0	10.0
JUNF	1.4	150	240	.33	475	213	17	• • •	419	7.8	10.0
05	•0	20	104	-14	345	94	5	.1	192	7.3	14.0
JULY											
C8	-1	70	209	.30	58.8	177	0	.4	373	7.9	17.5
ŞEP.		90								8.3	
14.,.	+2	90	324	.45	31.2	260	12	.6	564	9.3	13.5

310 BEAR RIVER BASIN

## 10039500 BEAR RIVER AT BORDER, WYO.

LOCATION.--Lat 42°12'40", long 111°03'11", in NejNej sec.15, T.14 S., R.46 E., Bear Lake County, Idaho, at gaging station 0.2 mile west of Wyoming-Idaho State line, 0.5 mile west of Border, and 2.1 miles upstream from Thomas Pork.

DRAINAGE AREA.--2,490 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1970.

Water temperatures: October 1965 to September 1970.

Sediment records: October 1968 to September 1970.

Setiment records: October 1968 to September 1969 (miscellaneous).

EXTREMES.-1969-70:

Dissolved solids: Maximum, 369 mg/l July 1-31; minimum, 273 mg/l May 1-31.

Hardness: Maximum, 265 mg/l July 1-31; minimum, 200 mg/l Nov. 1-19, Apr. 1-30.

Specific conductance: Maximum daily, 688 micromhos July 19; minimum daily, 464 micromhos May 21.

#### CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					015-	DIS-						
		MEAN		TOTAL	SOLVED CAL-	MAG- NE-		PO- TAS-	BICAR-	CAR-		CHLO-
		DIS-	SILICA	IRON	CIUM	SIUM	SODIUM	SIUM	BONATE	BONATE	SULFATE	RIDE
	TIME	CHARGE	(\$102)	(FE)	(CA)	(MG)	(NA)	(K)	(HCO3)	(CO3)	(504)	(CL)
DATE		(CFS)	(MG/L)	(UG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)
OCT.												
01-31		168	11		48	26	22	1.6	201	0	66	30
NOV.												
01-19		181	8.1		44	22	22	1.6	171	0	67	29
20-30 DEC •		174	9.4		46	25	25	1.9	177	0	77	34
01-31		168	8.2		54	27	23	1.9	204	0	67	34
JAN.		200	0.2		,,	2,				-		
01-11		165	9.9	~-	51	22	26	1.6	198	0	73	30
12-29		198	9.4		52	23	19	1.6	199	0	64	27
30-31		184	9.1	~-	54	25	22	1.6	207	0	72	25
FEB.												
01-28		184	9.1	~	54	25	22	1.6	207	0	72	25
MAR.												
01-31		161	7.4		59	24	25	2.1	214	15	58	29
APR.												
01-30		195	9.2	~-	42	23	25	2.0	186	0	71	22
MAY												
01-31		461	10		46	22	22	2.1	153	21	52	22
JUNE										_		
01-17		1380	12		53	24	28	3.0	255	0	43 52	27 35
18-30		910	12		63	24	32	2.8	271	0	52	30
JULY						27	34	2.3	300	0	56	30
01-31		409	9.8		61	21	34	2.3	300	U	20	30
AUG. 01-31		161	8.6		49	25	29	2.2	195	12	65	27
SEP.		101	8.0		49	25	29	2.2	175	12	0,5	
01-15		155	7.3		63	25	26	2.2	250	0	73	22
16-30		164	6.5		63	26	25	2.1	250	ŏ	69	24
10-30		104	0.0		05	20	2,5	2.1	230	•	••	
WTD. AVG.			10		53	24	27	2.3	226	4	57	28
TIME WID.												
AVG.		302	9.2		52	25	25	2.0	212	4	64	28
TONS PER DAY			8.2		44	20	22	1.9	184	3	47	23
				ANA	LYSES OF	ADDITIONA	L SAMPLES					
DCT.												
	1335	153	9.0	20	69	24	22	1.4	267	0	71	22
12 DEC.	1333	1,73	9.0	20	09	24		1.44	20.	·		
04	1545	200			64	28	25	1.7	276	0	65	29
MAR.	1777	250			04	20	4.5			•		
09	1050	205	7.2	100	64	24	25	1.6	238	0	74	30
11	1200	240			61	25	28	1.8	233	9	62	30
JÜNE		2.0										
10	1030	1430			49	24	24	2.8	248	D	48	24
AUG.												
05	1520	216			62	27	30	2.3	288	0	57	29
SEP.												
01	1720	129	8.5	0	59	28	28	2.3	247	6	75	30

## FIELD DETERMINATIONS

		DIS-	SPECI- FIC COND- UCTANCE	РН	DIS- SOLVED	TEMPER-
DATE	TIME	CHARGE (CFS)	(MICRO- MHOS)	(ST1NU)	OXYGEN (MG/L)	ATURE (DEG C)
DEC.						
04	1545	200	620	7.8	12.6	0.0
MAR.						
11	1200	240	580	8.5	12.2	0.0
JUNE 10	1030	1430	540	8.0	8.0	11.5

## 10039500 BEAR RIVER AT BORDER, WYO .-- Continued

EXTREMES. -- 1969-70: -- Continued

EXTREMES.--1969-70:--Continued
Water temperatures: Maximum, 23.0°C Aug. 7; minimum, freezing point Nov. 19, Jan. 2, 30.
Period of record:
Dissolved solids: Maximum, 480 mg/l Mar. 29 to Apr. 6, 1967; minimum, 219 mg/l Mar. 31 to Apr. 6, 1969.
Hardness: Maximum, 311 mg/l July 1-15, 1969; minimum, 159 mg/l Mar. 31 to Apr. 6, 1969.
Specific conductance: Maximum daily, 883 micromhos July 21, 1966; minimum daily, 312 micromhos Apr. 3, 1969.
Water temperatures: Maximum daily, 883 micromhos July 21, 1966; minimum daily, 312 micromhos Apr. 3, 1969.
KEMARKS.--Daily samples for chemical analysis composited by discharge. Additional samples were collected for more comprehensive definition of water quality. Maximum observed during water year: Hardness, 276 mg/l
Dec. 4.

	DIS- SOLVED FLUO- RIDE	NITRATE	DIS- SOLVED BORON	DIS- SOLVED SOLIDS (SUM OF CONSTI-	DIS- SOLVED SOLIDS (TONS	DIS- SOLVED SOLIDS (TONS	HARD- NESS	NON- CAR- BONATE HARD-	SODIUM AD- SORP- TION	SPECI- FIC COND- UCTANCE	РН	TEMPER-
	(F)	(NO3)	(8)	TUENTS)	PER	PER	(CA.MG)	NESS	RATIO	(MICRO-	rn	ATURE
DATE	(MG/L)	(MG/L)	(UG/L)	(MG/L)	AC-FT)	DAY)	(MG/L)	(MG/L)	W4110	MHOS)	(UNITS)	(DEG C)
	******					•	*********	,				
DCT.												
01-31	•2	.3	80	304	•40	134	229	64	-6	512	8.2	
NOV.	_	_							-			
01-19 20-30	.3	.5	100	279 306	.36	130 135	200	60 73	.7	471 509	8.0 7.9	
DEC.	.3	.6	60	300	.39	155	218	13	• 1	209	7	
01-31	.3	2.8	20	318	.44	146	245	78	.6	529	8.0	
JAN.	•••				• • • •							
01-11	. 3	1.0	80	312	.43	140	218	56	.8	533	8.0	
12-29	. 3	1.0	20	295	.41	159	225	62	.6	501	8.0	
30-31	.3	.4	40	311	•41	149	239	69	.6	542	8.2	
FE8. 01-28	_									542	8.2	
MAR.	.3	•4	40	311	.41	149	239	69	•6	242	0.2	
01-31	.3	.3	50	325	-46	164	246	45	.7	590	8.4	
APR.	•••	• • •	,,		• • • •		240	1,5				
01-30	.3	-0	40	286	-40	154	200	47	•8	504	8.2	
MAY												
01-31	•2	.8	10	273	.36	326	205	44	.7	468	8.5	
JUNE	_	_										
01-17 18-30	.3	-5	70 80	316 354	.44	1190 904	230	21 33	.8	538 603	8.1 8.2	
JULY	.3	• 3	80	374	• 50	904	255	23	• • •	603	0.2	
01-31	.3	.4	80	369	•52	422	265	19	.9	643	8.2	
AUG.												
01-31	• 7	. 2	80	315	.44	141	225	45	.8	538	8.5	
SEP.	_	_							_			
01-15	.3	• l	70	342	-47	144	260	55	• 7	578 586	8.0 8.0	
16-30	• 2	.1	60	339	•48	156	264	59	.6	280	0.0	
WTD. AVG.	.3	.6	58	318	. 44		233	41	.8	545	8.2	
TIME WTD.	• • •	••	,,	510	• • • •			**	• •			
AVG.	.3	.6	56	314	.43		232	51	.7	540	8.2	
TONS												
PER DAY	•2	.5	0	259								
				ANA	LYSES DF	ADDITIONAL	L SAMPLES					
DCT.												
12	•2	.6	0	350	.48	146	271	52	.6	603	8.1	3.5
DEC.	• •	•0	U	330	.40	140	211	32	• •	603	0.1	3.7
04				349	.47	187	276	50	.7			0.0
MAR.					• • •	•••						
09	.3	•0	40	343	. 47	190	259	64	.7	577	8.2	1.5
11				331	.46	220	254	48	. 8			0.0
JUNE								_	_			
10 AUG.				293	. 44	1240	220	13	.7			11.5
05				349	.49	209	266	30	.8	603	8.1	19.0
SEP.				347	• + 9	209	200	30	••	603	0.1	17.0
01	.4	.1	80	358	.51	130	265	52	.8	633	8.4	20.0

AVG

7.5

4.0

1.0

1.0

1.5

#### BRAR RIVER BASIN

### 10039500 BEAR RIVER AT BORDER, WYO .-- Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	(ONCE-DAILY MEASUREMENT)													
DAY	OCT	NDV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	603	554	621	620	579	556	569	593	575	597	594	553		
2	579	571	627	645	524	557	589	608	578	611	606	590		
2 3 4	564	557	628	621	599	562	596	608	550	618	611	566		
4	573	543	561	622	612	562	624	570	529	623	617	586		
5	5 30	545	615	638	557	544	628	576	523	613	587	562		
6 7 8	554	578	542	642	596	572	594	526	520	636	633	555		
7	584	557	602	661	551	569	610	506	516	652	609	548		
8	589	539	626	638	552	551	582	468	504	64.6	604	581		
9	586	571	613	643	571	570	601	474	511	648	605	624		
10	585	576	620	641	580	579	611	494	518	625	609	622		
11	564	574	547	626	603	589	564	499	531	607	599	592		
12	590	562	606	576	569	590	540	526	538	639	604	594		
13	595	567	547	586	517	577	572	545	542	645	585	596		
14	544	582	584	575	548	578	599	588	558	642	613	590		
15	582	576	589	581	545	593	604	599	572	658	611	586		
16	614	579	598	570	539	594	639	604	568	67L	572	556		
17	573	583	602	566	543	604	640	602	572	677	603	565		
18	585	575	601	556	5 3 2	610	554	5 3 0	588	680	566	583		
19	578	591	593	552	570	617	549	470	609	688	606	580		
20	557	631	566	545	593	626	550	477	617	680	580	641		
21	575	622	549	547	61.2	6 20	563	464	612	682	576	607		
22	566	595	546	54 L	60 2	607	563	465	601	686	582	585		
23	581	613	553	534	572	619	576	477	652	657	577	583		
24	578	652	553	532	569	605	582	477	6 30	657	574	576		
25	587	648	575	536	569	607	594	545	601	673	586	587		
26	572	627	594	540	559	621	584	554	592	652	604	619		
27	573	649	588	535	569	625	584	475	588	647	605	624		
28	576	643	625	551	568	599	576	474	5 8D	646	623	614		
29	570	648	623	571		594	589	465	571	647	6 20	586		
30	575	645	653	602		598	599	573	578	636	611	587		
31	585		669	654		623		577		627	613			
AVG	576	592	594	589	568	591	588	529	567	647	600	588		

#### TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT) DAY OCT NOV DEC JAN FEB APR MAY JUN JUL AUG SEP 14.0 10.0 10.0 12.0 8.0 18.5 22.0 17.5 21.0 18.5 18.0 17.5 18.0 0.5 0.0 1.0 0.5 1.0 0.5 1.0 1.0 1.5 1.5 1.5 1.0 1.0 2.0 4.0 6.5 7.5 6.5 10.0 7.0 15.0 12.0 14.5 19.0 15.0 19.5 20.5 1 8.0 1.5 6.0 1.0 6.0 1.0 1.0 14.0 6.0 10.0 9.0 12.5 9.0 16.5 20.0 10.5 7.5 7.0 10.5 13.0 15.5 15.0 **L4.**5 6.0 5.0 6.0 6.0 1.5 0.5 1.0 17.0 15.0 14.5 20.0 12.0 20.0 19.5 21.5 21.5 23.0 21.5 15.5 16.5 10.0 12.0 10.0 10.0 1.5 2.0 2.0 0.5 0.5 1.0 4.0 2.0 2.5 6 8 1.0 1.0 1.0 4.5 1ó 8.0 20.0 7.5 12.0 8.5 9.0 14.5 15.0 20.5 21.0 20.0 18.5 15.0 12.0 14.0 12.5 4.0 5.0 4.0 5.0 4.0 5.0 5.0 4.0 5.0 5.0 1.0 1.5 1.0 1.0 12.5 10.0 13.0 10.5 20.0 20.5 20.0 20.5 21.0 1.5 1.0 1.5 1.5 1.5 2.0 1.0 2.0 4.5 5.0 5.0 4.5 4.5 6.5 7.0 4.5 7.5 6.5 11 12 13 14 15 1.0 12.0 16 17 18 19 4.0 5.0 5.0 6.0 4.0 2.0 2.0 0.0 1.5 1.0 1.5 1.5 1.0 2.5 2.0 2.0 1.5 1.5 1.0 0.5 0.5 5.0 2.5 3.0 5.0 6.0 7.0 8.0 7.0 12.0 11.5 16.5 14.0 14.5 13.5 14.5 18.0 19.0 19.0 17.0 20.5 21.5 21.0 20.5 20.5 20.0 20.0 18.5 13.0 14.0 15.0 15.0 12.5 6.0 20 2.0 2.0 2.0 2.0 2.0 1.0 0.5 1.0 0.5 1.0 1.5 0.5 0.5 0.5 4.0 4.0 7.0 5.5 4.0 5.0 4.5 7.0 7.0 12.5 13.5 14.0 14.5 17.0 20.0 19.5 20.0 15.5 20.5 21.0 17.0 18.0 20.0 16.5 19.0 20.5 21.5 21.0 12.0 11.5 9.0 9.0 6.5 21 22 23 24 25 6.0 1.0 1.5 2.0 1.D 1.5 8.0 10.0 8.0 8.0 3.0 20.0 8.0 6.0 6.0 6.0 5.0 2.0 2.0 2.0 1.0 2.0 10.5 12.5 14.5 15.0 15.5 17.5 21.0 19.5 20.5 16.5 19.5 20.5 19.0 20.0 17.0 20.5 20.0 26 27 28 29 1.0 0.5 1.5 1.0 4.5 4.0 4.5 5.0 4.5 3.5 1.5 2.0 1.5 1.0 6.0 7.0 5.5 4.5 5.5 21.0 11.0 1.0 18.0 15.0 17.5 13.5 8.5 10.0 10.5 30 31 0.5 0.0 ---15.0

4+0

6.5

12.5

16.0

19.5

19.5

13.0

### 10046000 RAINBOW INLET CANAL NEAR DINGLE, IDAHO

LOCATION.--Lat 42°13'48", long 111°17'43", in SE¼ sec.3, T.14 S., R.44 E., Bear Lake County, at gaging station 1.5 miles west of Dingle and 1.8 miles downstream from headworks of Stewart Dam.

PERIOD OF RECORD, --Chemical analyses: October 1965 to September 1969 (miscellaneous), October 1969 to September 1970.

REMARKS.--Canal diverts from Bear River at Stewart Dam in NE4 sec. 34, T.13 S., R.44 E., for storage in Bear Lake.
At times flow in canal is augmented by surplus water from Black Otter Slough entering at station and by
seepage and wastage from irrigation lands on both sides of canal.

DATE	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVEO CAL- CIUM (CA) (MG/L)	O(S- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE S (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)
OCT.												
10 NOV.	180	6.2	66	27	36	1.8	271	0	66	39	•2	1.0
06 OFC.	182	5.9	65	25	34	1.2	270	0	64	39	•2	-1
04	130		63	35	36	1.6	286	0	68	44		
JAN. 09	85		71	29	37	1.9	323	0	69	44		
FEB. 09	145		71	26	36	1.8	290	0	74	42		
MAR.												
Il	112		63	24	32	1.7	223	16	65	38		
10	267	-	59	29	43	2.5	258	0	80	54	_	
13	173		60	24	33	2.3	257	0	50	40		
10 AUG.	1030		54	23	28	2.8	257	0	42	29		
05	195		60	27	39	2.3	140	71	61	44		
OATE	DIS- SDLVEC ORTHO PHOS- PHATE (PO4) (MG/L)	OIS- SOLVED BORON (8)	DUE AT	SOLVED SOLIDS (TONS PER			TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	: РН	OIS- SOLVEO OXYGEN ) (MG/L)	ATURE	
OCT.												
10 NOV.	.00	-00	393	191	274	51	• 9	644	6.7	9.7	7.	5
06 DEC.	•02	40	390	192	267	46	•9	637	7.9	10.7	4.	0
04		·	416	146	300	65	•9	671	7.8	12.0	1.	0
JAN. 09			429	98.5	296	31	.9	715	7.6	10.5	. 0.	0
FEB. 09			408	160	282	44	.9	670	7.7			-
MAR. 11			354	107	258	50						
APR.							•9	604	8.4	11.6	3.	U
10			412	297	265	53	1.1	667	7 - 8	9.8	9.	0
13			356	166	250	39	.9	577	7.6	9.3	9.	0
10 AUG.			330	918	228	17	.8	532	8.1	8.0	15.	0
05			383	202	260	28	1.1	646	8.3	8.0	20.	0

314 BEAR RIVER BASIN

## 10059500 BEAR LAKE OUTLET (ANAL NEAR PARIS, IDAHO

LOCATION.--Lat 42°13'00", long 111°20'35", in SW½ sec.8, T.14 S., R.44 E., Bear Lake County, at gaging station on right bank, 2,000 ft downstream from headgates (at dike; and 3 miles southeast of Paris.

PERIOD OF RECORD. -- Chemical analyses: October 1965 to September 1969 (miscellaneous), October 1969 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SIL ICA (S102) (MG/L)	SOLVED CAL- CIUM (CA)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SDDIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)		ULFATE (SO4) (MG/L)		DIS- SOLVFD FLUO- RIDE / (F) (MG/L)	NITRATE (NO3) (MG/L)
OCT.	16	8.3	65	43	51	3.7	335	0	89	54	.3	-1
NOV.	10	5.5	0,5		,,	···						
06 DEC.	463	5.9	66	27	36	1.3	276	0	64	41	•2	-1
04 JAN.	438		83	28	38	3.5	330	0	62	44		-
09 FEB.	400		40	55	41	4.4	350	0	69	46		
09	6.0		64	42	42	4.1	336	0	87	47		
MAR. 11	5.0		60	30	43	9.7	275	7	69	47		
APR. 10	5.0		60	37	45	2.3	3 34	0	83	51		
MAY 13	8.0		51	25	22	2.6	261	0	32	26		
JUNE 10	8.0		58	53	59	4.0	366	0	104	66		
AUG. 05	750		42	42	37	3.3	170	67	54	40		
DATE	DIS- SOLVI ORTHO- PHOS- PHATI ( PO4)	ED DIS- - SOLVE F 90RON (B)	D (RFSI- N OUE AT N 180 C)	SOLVEO SOLIDS (TONS PER			TION RATIO	A SPECI- FIC COND- UCTANCI (MICRO- MHOS)	РН	DIS- SOLVES OXYGEN (MG/L)	ATURE	
ЭСТ. 10		)5 <u>5</u>	30 497	21.5	338	64	1.2	798	7.3	10.0	5.	_
NOV.			0 388	485	274	48	.9	647	8.0			
DEC.												
04 JAN.			435	479	324	53	.9	704	8.2			
09 FEB.	•		432	467	328	41	1.0	749	8.2	11.2	0.	0
09 MAR.	•		468	7.5	3 332	56	1.0	770	7.8	12.7	0.	D
11			418	5.64	274	36	1.1	701	8.4	12.0	5.	5
10			452	6.10	304	55	1.1	729	7.9	10.9	8.	5
13	•		301	6.50	0 230	16	.6	495	7.7	9.1	7.	5
10			580	12.5	360	60	1.4	886	8.0	10.5	16.	D

-- -- 391 792 278 27 1.0 654 8.3 7.2 21.0

## BEAR RIVER BASIN 315

## 10092200 BEAR RIVER AT CORNISH, UTAH

LOCATION.--Lat 41°58'32", long 111°56'11", in SW\[ 382\] sec.3, T.14 N., R.1 E., Cache County, on upstream side of bridge on State Highway 61, 0.9 mile east of Cornish.

DRAINAGE AREA. --4,500 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: September 1969 (miscellaneous), October 1969 to September 1970.

## CHEMICAL ANALYSES. WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SDLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE {SO4} {MG/L}	CHLO- RIDE (CL) (MG/L)
oct.										
06 NOV.	340	11	63	50	90	14	416	0	70	105
05	310		59	50	94	15	399	9	67	118
08	800		58	54	52	7.8	386	0	60	68
JAN.										
13 FEB.	850		59	49	47	7.2	398	)	65	54
06	580		68	44	98	14	405	0	70	137
M AR. 12	900		78	38	57	2.0	362	16	60	68
APR.				,,,			242			••
08	830		67	39	51	9.5	372	0	57	62
MAY 11	750		58	36	46	8.9	335	0	52	58
JUNE				,,,		• • •		•		
12	530		57	26	43	8.6	296	0	39	54
AUG. 04	500		96	18	59	9.3	345	0	62	80

DATE	DIS- SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPECI- FIC CONO- UCTANCE (MICRO- MHOS)	PH (UNITS)	DIS- SOLVED OXYGEN (MG/L)	TEMPER- ATURE (DEG C)
OCT.									
06	623	572	364	22	2.1	1030	7.9	9.6	14.0
NOV.									
05	610	511	352	25	2.2	1060	7.6	10.4	9.0
DFC. 08	501	1080	364	47	1.2	857	8.0	12.1	1.5
JAN.	301	1000	304	47	1.02	0,1	0.0	12.1	1,
13	497	1140	349	23	1.1	835	8.2	12.4	0.0
FEB.									
06	636	996	352	20	2.3	1090	8.1	11.6	5.0
MAR.									
12	526	1280	352	28	1.3	881	8.5	10.9	6.5
APR.	4.00	1010	320	25	1.2	813	8.0	11.9	10.0
08 May	489	1060	330	25	1.2	013	8.0	11.9	10.0
11	448	907	294	19	1.2	727	7.6	9.2	11.0
JUNE	.,,	, , ,							
12	396	567	250	7	1.2	667	8.1	9.1	16.0
AUG.									
04	492	664	316	33	1.4	849	8-1	10.6	23.0

#### 10136500 WEBER RIVER AT GATEWAY, UTAH

LOCATION.--Lat 41°08'15", long 111°49'55", in NW\sw\delta sec. 27, T.5 N., R.1 E., Morgan County, at gaging station on left bank, 400 ft downstream from tailrace of Gateway powerplant, 500 ft upstream from Union Pacific Railroad bridge, 1,200 ft downstream from Strawberry Creek, and 3,200 ft east of section house at Gateway.

DRAINAGE AREA. -- 1,610 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: May 1958 to September 1970. Water temperatures: October 1958 to September 1959.

REMARKS. -- Flow regulated by Rockport, Echo, and East Canyon Reservoirs.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (LFS)	SILICA (SIU2) (MG/L)	DIS- SOL VED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SCDIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CD3) (MG/L)	SUL FATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
CCT.									_			
27 NUV.	1640	368						239	0	40	22	
24	1600	100						281	0	40	30	
JAN.												
22	1400	939	13	26	16	9.3	1.3	139	0	15	12	.4
MAR. 10	1640	153	8.9	62	17	20	3.3	249	0	39	27	•2
AFR.	10.0	133	0.,	02	••	2.0	,,,					
36	1600	410	5.5	61	16	17	2.4	245		37	21	•3
MAY								168	0	26	16	•2
Ob JUNE	1607	787	12	41	11	12	2.0	100	0	20	10	••
C2	1600	1000	8.1	45	11	11	2.9	179	0	20	13	• 2
JLLY												
13	1600	554	7.6	63	18	13	2.5	249	c	27	17	•2
AUG.				_				25.0		24	18	
C4	1600	542	9.9	61	15	13	3.1	250		26 32	18	•6 •3
31	1600	490	31	57	18	13	3.3	240	0	32	ra	• 3
SEP.								244	0	30	18	.1
28	1530	275	8.5	45	2C	16	4.1	244	U	30	ra	• 1

UATE	NI TRATE (N) (MG/L)	DIS- SCLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	OIS- SOLVED SOLIDS (SUM OF CONST(- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SULVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SUDIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
CCT.					_						
27 NGV.			292		• 40	290	222	26	.6	492	7.5
24			338		•46	91.3	258	28	.7	569	7.5
JAN.			3,00		-,0	,,,,	2,0		•		
22		40	1 83	165	.25	464	132	18	.4	280	7.2
MAR.								22		512	7.5
10 APR.		6C	298	301	+41	123	226	22	•6	512	1.5
05		30	284	283	.39	314	218	18	.5	473	
PAY					•••						
C5		50	2 6 8	204	• 28	442	149	11	- 4	331	7.B
JUNE 02		4C	2 30	200	.31	621	156	9	.4	347	8.0
JULY		40	2 30	200	• 31	921	196	,	••	347	0.0
13	.20	40	274	271	.37	410	228	24	.4	459	7.8
AUG.											
64	. 36	30	274	271	•37	401	215	21	. 4	461	
31	.40	LO.	276	292	.38	365	218	21	.4	456	8.2
SEP. 28		20	285	262	.39	212	195	0	•5	478	8.1

# 10172200 RED BUTTE CREEK AT FORT DOUGLAS, NEAR SALT LAKE CITY, UTAH (Hydrologic bench-mark, pesticide, and radiochemical station)

LOCATION. -- Lat 40°46'48", long 111°48'19", in NW sec. 35, T.1 N., R.1 E., Salt Lake County, at gaging station 0.3 mile upstream from spillway of Red Butte Reservoir, 1.5 miles northeast of Fort Douglas, and 5 miles north-east of Salt Lake City.

DRAINAGE AREA. -- 7.25 sq m1.

PERIOD OF RECORD. --Chemical analyses: April 1964 to September 1966, August 1967 to September 1970. Water temperatures: April 1964 to September 1970. Sediment records: October 1986 to September 1969 (partial records).

EXTREMES.--1969-70:
Water temperatures: Maximum, 21.0°C Aug. 12-14, 18, 29-30; minimum, freezing point Nov. 4, 5.

Period of record:
Water temperatures: Maximum, 24.0°C July 29, 31, Aug. 1, 3, 4, 1969; minimum, freezing point on many days during winter periods.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUN (CA) (MG/L)	OIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (NG/L)	PD- TAS- SIUN (K) (NG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
NOV.									_		
05 DEC.	1200	1.7	11	83	34	12	1.0	302	0	100	16
18 JAN.	1225	1.6	10	58	32	12	. 5	215	0	96	15
27 MAR.	1615	2.5	9.5	91	30	12	.9	295	0	110	17
03	1400	2.4	9.8	85	28	12	•9	276	0	106	14
01 AUG.	1145	1.5	9.6	77	21	11	1.1	266	0	71	12
11 SEP.	1253	2+5	14	71	.27	12	1.1	271	0	74	13
22	1425	2.0	12	72	28	13	.9	271	0	92	8.0
	D1 S-		OIS- SOLVED	DIS- SOLVED	D15-	DIS-		NDN~	SODIUM	SPECI-	
DATE	SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLIOS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIOS (TONS PER DAY)	HARD- NESS (CA.4G) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- NHOS)	PH (UNITS)
	SOLVED FLUO- RIDE (F)	SOL VED BORON	SOLIDS (RESI- DUE AT 180 C)	SOLIOS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	SOLVED SOLIOS (TONS PER	NESS (CA. 4G)	CAR- BONATE HARD- NESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO-	
NOV. 05	SOLVED FLUO- RIDE (F)	SOLVED BORON (B)	SOLIDS (RESI- DUE AT 180 C)	SOLIOS (SUM OF CONSTI- TUENTS)	SOLVED SOLIDS (TONS PER	SOLVED SOLIOS (TONS PER	NESS (CA. 4G)	CAR- BONATE HARD- NESS	AD- SORP- TION	FIC COND- UCTANCE (MICRO-	
NDV. 05 DEC. 18	SOLVED FLUO- RIDE (F) (MG/L)	SOLVED BORON (B) (UG/L)	SOLIDS (RES1- DUE AT 180 C) (MG/L)	SOLIOS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIOS (TONS PER DAY)	NESS (CA. 4G) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
NOV. 05 DEC. 18 JAN. 27	SOLVED FLUO- RIDE (F) (MG/L)	SOLVED BORON (B) (UG/L)	SOLIDS (RES1- DUE AT 180 C) (MG/L)	SOLIOS (SUM OF CONSTI- TUENTS) (NG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIOS (TONS PER DAY)	NESS (CA. 4G) (MG/L)	CAR- BONATE HARD- NESS (NG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 7.9
NOV. 05 DEC. 18 JAN. 27 NAR. 03	SOLVED FLUO- RIDE (F) (MG/L)	SOLVED BORON (B) (UG/L)	SOLIDS (RES1- DUE AT 180 C) (MG/L) 414	SOLIOS (SUM OF CONSTI- TUENTS) (MG/L) 406	SOLVED SOLIDS (YONS PER AC-FT) -56	SOLVED SOLIOS (TONS PER DAY)	NESS (CA. MG) (MG/L) 348 276	CAR- BONATE HARD- NESS (NG/L)	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 642	7.9 7.9
NOV. 05 DEC. 18 JAN. 27 NAR. 03 MAY 01	SOLVED FLUO- RIDE (F) (MG/L)	SOLVED BORON (B) (UG/L) 30 20 40	SOLIDS (RES1- DUE AT 180 C) (MG/L) 414 351 419	SOLIOS (SUM OF CONSTI- TUENTS) (NG/L) 406 332 416	SOLVED SOLIDS (TONS PER AC-FT) .56 .48	SOLVED SOLIOS (TONS PER DAY) 1.99 1.54	NESS (CA, 4G) (MG/L) 348 276 352	CAR- BONATE HARD- NESS (MG/L) 100 100	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 642 543	7.9 7.9 7.9 8.0
NOV	SOL VEO FLUO- RIDE (F) (MG/L)	SOLVED BORON (B) (UG/L) 30 20 40	SOLIDS (RES1- DUE AT 180 C) (MG/L) 414 351 419	SDLIOS (SUM OF CONSTI- TUENTS) (NG/L) 406 332 416 392	SOLVED SOLIDS (TONS PER AC-FT) .56 .48 .57	SOLVED SOLIOS (TONS PER DAY) 1.99 1.54 2.87	NESS (CA-4G) (MG/L) 348 276 352 328	CAR- BONATE HARD- NESS (MG/L) 100 100	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 642 543 645	7.9 7.9 7.9 8.0 7.7

## JORDAN RIVER BASIN

## 10172200 RED BUTTE CREEK AT FORT DOUGLAS, NEAR SALT LAKE CITY, UTAH--Continued

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (WATER-STAGE RECORDER WITH TEMPERATURE ATTACHMENT)

					KECUKDEK	MI IH IEMP		IIIACHMENI	•			
	ост	OBER	NOVE	MBER	DEC	EMBER	JAL	IUARY	FEBR	RUARY	M	ARCH
DAY	XAM	MIN	MAX	MIN	MAX	MIN	MAX	MIN	XAM	MIN	MAX	MIN
1	14.5	10.0	6.0	5.5	2.5	2.5	2.0	2.0	2.5	2.5	5.5	4.5
2	11.0	8.0	5.5	5.0	2.5	2.5	2.0	2.0	2.5	2.5	8.0	3.0
3	9.0	8.0	5.5	5.0	2•5 2•5	2.5	2.0	2.0 2.0	2.5 4.0	2.5 2.5	6.5 4.5	2.0 2.5
4 5	8.0 9.0	8.0 8.0	6.0 9.0	0.0	2.5	2•5 2•5	2.0 2.0	2.0	3.5	2.5	5.0	3.0
										3.5	6.5	1.5
6 7	9.5 10.5	8.0 8.0	7.0 7.0	6.0 5.5	2•5 2•5	2.5 2.5	2.0	2.0 2.0	5•5 5•5	3.0	8.5	3.0
ė	9.0	7.5	6.5	4.5	2.5	2.0	2.5	2.5	5.5	3.0	5.5	4.0
9	9.0	7.5	7.0	5.0	2.5	2.0	2.5	2.5	5.5	2.5	8.0	3.0
10	7.5	7.5	6.5	4.5	2.0	1.5	2.5	2.5	6.5	3.5	5.5	3.0
11	8.0	7.5	6.5	4.5	2.5	1.5	2.5	2.5	6.5	3.5	6.5	3.0
15			8.0	5.5	2.5	2.5	3.0	2.5	7.5	5.0 3.5	7.5 8.0	3.0 3.5
13 14			7.0 6.5	5.0 5.0	3.0 3.5	3.0 2.5	3.0 3.5	3.0 3.0	4.5 4.5	1.5	6.5	3.5
15	8.5	5.0	5.5	5.0	3.5	2.5	3.5	2.5	4.5	2.5	4.5	3.5
	8.5	6.5	5.5	5.0	3.5		3.0	3.0	4.5	2.5	7.0	3.5
16 17	9.0	8.0	5.5	2.0	3.5	2.5 2.5	3.0	3.0	3.5	1.5	5.5	3.5
18	6.5	6.5			3.5	2+5	4.0	3.0	3.0	1.5	4.0	3.5 3.5
19	7.0	6.5			4.0	3.5	4.5	3.5	2.5	1.5	5.5	3.5 3.5
20	9.0	6.5			4.5	3.5	4.5	4.0	3.0	1.5	6.0	
21	10.0	6.5			5.5	4.5	4.5	3.5	4.5	1.5	6.0	3.5 3.5
22	10.5	6.5			4.5	2.5	4.5	4.5 3.5	7.0 6.5	2.5 2.5	9.0 10.0	3.5 3.5
23 24	10.0 10.0	6•5 6•5			3.5 3.5	2.5 2.0	4.5 4.5	4.5	6.5	1.5	11.0	4.5
25	10.0	6.5			2.5	2.0	5.0	3.5	6.5	1.5	9.0	3.5
26	10.0	6.0			2.5	1.5	4.5	3.5	6.5	1.5	5.5	3.5
27	9.0	6.0			2.5	2.0	4.5	3.0	6.5	1.5	7.5	3.5
28	7.0	5.5			2.0	2.0	3.0	2.5	6.5	3.5	6.0	3.5 3.5
29	6.5	5.5			2.0	5.0	2.5	2.5			3.5	3.5
30 31	6.0 6.5	5.5 5.5			2.0	2.0	2.5 2.5	2.5 2.5			5.5 3.5	3.5 3.5
MONTH	14.5	5.0			5.5	1.5	5.0	2.0	7.5	1.5	11.0	1.5
	AF	PRIL		AY	J	UNE	JI	JLY	AU	GUST	SEP	TEMBER
DAY					_							
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	AUI MAX	GUST MIN	MAX	MIN
1	MAX 6.5	MIN 3.5	MAX 11.0	MIN 4.0	MAX 15.5	MIN 7.0	MAX 16.5	MIN 9.0	MAX	MIN	MAX 20.0	MIN 14.5
l 2	MAX 6.5 9.0	MIN 3.5 4.0	MAX 11.0 12.0	MIN 4.0 4.5	MAX 15.5 16.0	MIN 7.0 8.0	MAX 16.5 18.5	MIN 9.0 10.0	MAX	MIN	MAX 20.0 19.5	MIN 14.5 13.5
1 2 3 4	MAX 6.5 9.0 8.5 10.5	MIN 3.5 4.0 4.0 4.0	MAX 11.0 12.0 13.0 13.5	MIN 4.0 4.5 5.0 5.5	MAX 15.5 16.0 16.5 15.5	MIN 7.0 8.0 9.0 9.0	MAX 16.5 18.5 19.0 20.0	9.0 10.0 11.0 11.5	MAX	MIN	MAX 20.0 19.5 19.0 18.5	MIN 14.5
1 2 3	MAX 6+5 9+0 8+5	MIN 3.5 4.0 4.0	MAX 11.0 12.0 13.0	MIN 4.0 4.5 5.0	MAX 15.5 16.0 16.5	MIN 7.0 8.0 9.0	MAX 16.5 18.5 19.0	9.0 10.0 11.0	MAX	MIN	MAX 20.0 19.5 19.0	MIN 14.5 13.5 12.0
1 2 3 4	MAX 6.5 9.0 8.5 10.5	MIN 3.5 4.0 4.0 4.0	MAX 11.0 12.0 13.0 13.5	MIN 4.0 4.5 5.0 5.5 6.5	MAX 15.5 16.0 16.5 15.5	MIN 7.0 8.0 9.0 9.0	MAX 16.5 18.5 19.0 20.0 20.0	9.0 10.0 11.0 11.5 12.0	MAX	MIN	MAX 20.0 19.5 19.0 18.5	MIN 14.5 13.5 12.0 13.5 11.0
1 2 3 4 5	MAX 6.5 9.0 8.5 10.5 11.0	MIN 3.5 4.0 4.0 4.0 4.0 7.0	MAX 11.0 12.0 13.0 13.5 13.5	MIN 4.0 4.5 5.0 5.5 6.5	MAX 15.5 16.0 16.5 15.5 14.0	MIN 7.0 8.0 9.0 9.0 9.0	MAX 16.5 18.5 19.0 20.0 20.0	9.0 10.0 11.0 11.5 12.0	HAX	MIN	MAX 20.0 19.5 19.0 18.5 15.0	MIN 14.5 13.5 12.0 13.5 11.0
1 2 3 4 5 6 7 8	MAX 6.5 9.0 8.5 10.5 11.0	MIN 3.5 4.0 4.0 4.0 4.0 7.0 7.0	MAX 11.0 12.0 13.0 13.5 13.5	MIN 4.0 4.5 5.0 5.5 6.5 8.0 6.5	MAX 15.5 16.0 16.5 15.5 14.0	MIN 7.0 8.0 9.0 9.0 9.0 9.0	MAX 16.5 18.5 19.0 20.0 20.0	9.0 10.0 11.0 11.5 12.0	MAX	MIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0	MIN 14.5 13.5 12.0 13.5 11.0
1 2 3 4 5 6 7 8 9	MAX 6.5 9.0 8.5 10.5 11.0 13.5 11.5 9.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0	MAX 11.0 12.0 13.0 13.5 13.5 13.5 9.0 12.0	MIN 4.0 5.0 5.5 6.5 8.0 6.5 5.5	MAX 15.5 16.0 16.5 15.5 14.0 13.5 13.5 14.5	MIN 7.0 8.0 9.0 9.0 9.0 9.0 9.0	MAX 16.5 18.5 19.0 20.0 20.0	9.0 10.0 11.0 11.5 12.0	HAX	MIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0 15.5	MIN 14.5 13.5 12.0 13.5 11.0
1 2 3 4 5 6 7 8 9	MAX 6.5 9.0 8.5 10.5 11.0 13.5 11.5 9.0 12.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 7.0	MAX 11.0 12.0 13.0 13.5 13.5 13.5 10.0 10.0	MIN 4.0 5.0 5.5 6.0 5.5 6.0 6.5 6.0	MAX 15.5 16.0 16.5 15.5 14.0 13.5 14.5 11.0	MIN 7.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.5 9.0	MAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 13.5	9.0 10.0 11.0 11.5 12.0 12.5 11.5	MAX	MIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 15.5	MIN 14.5 13.5 12.0 13.5 11.0
1 2 3 4 5 6 7 8 9 10	MAX 6.5 9.0 8.5 10.5 11.0 13.5 11.5 9.0 12.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 7.0 7.0	MAX 11.0 12.0 13.0 13.5 13.5 13.5 9.0 12.0 10.0 8.0	MIN 4.05 4.05 5.55 6.05 6.55 6.0	MAX 15.5 16.0 16.5 15.5 14.0 13.5 13.5 14.5 11.0	MIN 7.0 8.0 9.0 9.0 9.0 9.0 9.5 9.0 9.5 3.0	MAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 19.0	9.0 10.0 11.0 11.5 12.0 12.5 11.5 12.0	MAX	MIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0 15.5 15.5	MIN 14.5 13.5 12.0 13.5 11.0 10.0 11.5 10.0 9.5
1 2 3 4 5 6 7 8 9 10	MAX 6.5 9.0 8.5 10.5 11.0 13.5 12.0 12.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 7.0 7.0 7.0	MAX 11.0 12.0 13.5 13.5 13.5 13.5 9.0 12.0 10.0 9.0	MIN 4.050555 055550 00	MAX 15.5 16.0 16.5 15.5 14.0 13.5 14.5 11.0	MIN 7.0 8.0 9.0 9.0 9.0 9.0 9.5 9.0 9.5 9.5 6.5	MAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 19.0	9.0 10.0 11.0 11.5 12.0 12.5 11.5 11.0	HAX	MIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 15.5 15.5	MIN 14.5 13.5 12.0 13.5 11.0 10.0 10.0 11.5 10.0 9.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14	MAX 9.0 8.5 10.5 11.0 13.5 9.0 12.0 8.5 10.0 10.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 7.0 7.0 6.5 6.5	HAX 11.0 12.0 13.0 13.5 13.5 13.5 10.0 10.0 10.0 10.0	M 40555 05555 00000	MAX 15.5 16.0 16.5 15.5 14.0 13.5 14.5 11.0 10.0	MIN 7.0 8.0 9.0 9.0 9.0 9.0 9.5 9.0 9.5 9.6 9.5 8.0	MAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 19.0	9.0 10.0 11.0 11.5 12.0 12.5 11.5 12.0	HAX	MIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0 15.5 15.5	MIN 14.5 13.5 12.0 13.5 11.0 10.0 11.5 10.0 9.5
1 2 3 4 5 6 7 8 9 10	MAX 6.5 9.0 8.5 10.5 11.0 13.5 11.5 9.0 12.0 12.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 7.0 6.5	MAX 11.0 12.0 13.5 13.5 13.5 9.0 12.0 10.0 8.0	MIN 05055 05555 05550 0000	MAX 15.5 16.0 16.5 15.5 14.0 13.5 14.5 11.0	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 9.5 3.0	MAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0	9.0 10.0 11.0 11.5 12.0 12.5 11.5 11.0 12.0	HAX	MIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.5 15.5 16.5 16.5	MIN 14.5 13.5 12.0 13.5 11.0 10.0 10.0 11.5 10.0 9.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	MAX 9.0 8.5 10.5 11.0 13.5 9.0 12.0 8.5 10.0 10.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 7.0 7.0 6.5 6.5 4.0	HAX 11.0 12.0 13.0 13.5 13.5 13.5 10.0 10.0 10.0 10.0 10.0 10.0	M 40555 05555 00000	MAX 15.5 16.0 16.5 13.5 13.5 13.5 11.0 10.0 9.0 11.0 10.5 13.5	MIN 7.0 8.0 9.0 9.0 9.0 9.0 9.5 5.5 6.5 8.0 8.0	MAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 13.5	9.0 10.0 11.0 11.5 12.0 12.5 11.5 11.0	21.0 21.0 20.0	MIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0 15.5 16.5 16.5 16.5 13.5	MIN 14.5 13.5 12.0 13.5 11.0 10.0 11.5 10.0 9.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MAX 6.5 9.0 8.5 10.5 11.0 12.0 12.0 12.0 10.0 10.5 9.0 6.5	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 6.5 6.5 4.0 4.0	MAX 11.0 12.0 13.0 13.5 13.5 13.5 12.0 10.0 10.0 10.0 10.0 12.5	MIN 4.5.05 6.5 5.5 6.5 5.5 6.5 5.5 5.5 6.5 5.5 5.	MAX 15.5 16.0 16.5 15.5 14.0 13.5 14.5 11.0 10.0 11.0 10.3 13.5 13.5 13.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 9.5 9.6 8.0 8.0 8.0	HAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 13.5	9.0 10.0 11.5 12.0 12.5 11.5 11.0 12.0	HAX	MIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0 15.5 16.5 16.5 16.5 13.5	MIN 14.5 13.5 12.0 13.5 11.0 10.0 10.0 9.5 11.0 9.0 9.0
1 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18	MAX 6.5 9.0 8.5 10.5 11.5 12.0 12.0 12.0 12.0 10.5 9.5 11.5	MIN 3-5 4-0 4-0 4-0 7-0 7-0 7-0 7-0 7-0 4-5 6-5 6-5 6-5	HAX 11.0 12.0 13.5 13.5 13.5 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10	HIN 44.55.55 8.55.55 6.0 5.55.5 5.66.0 5.66.5	15.5 16.0 16.5 15.5 14.0 13.5 14.5 11.0 10.0 9.0 11.0 10.5 13.5 13.5 13.5 13.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 9.5 9.5 8.0 8.0 8.0 8.0 9.0	HAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 19.0 19.5	9:0 10:0 11:0 11:5 12:0 12:5 11:5 11:0 12:0	HAX	HIN	MAX 20.0 19.5 19.5 18.5 15.0 11.0 16.5 18.5 15.5 16.5 13.5 13.5 13.5 13.5 14.5 15.5	MIN 14-5 13-5 12-0 13-5 11-0 10-0 10-0 10-0 11-0 9-5 11-0 9-0 9-0 9-0 9-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MAX 6.5 9.0 8.5 10.5 11.0 12.0 12.0 12.0 10.0 10.5 9.0 6.5	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 6.5 6.5 4.0 4.0	MAX 11.0 12.0 13.0 13.5 13.5 13.5 12.0 10.0 10.0 10.0 10.0 12.5	MIN 4.5.05 6.5 5.5 6.5 5.5 6.5 5.5 5.5 6.5 5.5 5.	MAX 15.5 16.0 16.5 15.5 14.0 13.5 14.5 11.0 10.0 11.0 10.3 13.5 13.5 13.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 9.5 9.6 8.0 8.0 8.0	HAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 13.5	9.0 10.0 11.5 12.0 12.5 11.5 11.0 12.0	HAX	MIN	20.0 19.5 19.0 18.5 15.0 16.5 16.5 15.5 16.0 15.5 16.5 13.5 14.5 14.5 14.5 15.5	MIN 14-5 13-5 12-0 13-5 11-0 10-0 10-0 11-5 10-0 9-0 9-0 9-0 10-0
1 2 3 4 4 5 6 7 7 8 9 10 0 11 12 13 14 15 16 17 18 19 20	MAX 6.5 9.0 8.5 10.5 11.0 13.5 9.0 12.0 8.5 10.5 9.0 6.5 9.5 11.5 11.5 11.5 8.5	MIN 3.5 4.0 4.0 4.0 4.0 7.0 7.0 7.0 7.0 6.5 6.5 4.0 4.0 4.0	11.0 12.0 13.0 13.5 13.5 13.5 12.0 10.0 10.0 10.0 10.0 10.0 10.0 12.5 14.5 14.5 14.5 14.5	HIN 4.5 5.5 6.5 6.5 5.5 6.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5	NAX 15.5 16.0 16.5 15.5 14.0 10.0 9.0 11.0 11.0 11.0 13.5 13.5 13.5 13.5 13.5	MIN 7.0 8.0 9.0 9.0 9.0 9.0 9.5 9.5 9.5 8.0 8.0 8.0 9.0 9.5	HAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 19.0 19.0	9.0 10.0 11.0 11.5 12.5 11.5 11.5 11.5 11.5	21.0 21.0 21.0 20.0 20.0 20.5 21.5 21.5 21.5	HIN	20.0 19.5 19.0 18.5 15.0 16.5 16.5 15.5 16.0 15.5 14.5 13.5 14.5 14.5 14.5	MIN 14-5 13-5 12-0 13-5 11-0 10-0 10-0 11-5 10-0 9-0 9-0 10-0 10-0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 14 15 16 16 17 18 19 20 21	MAX 6.5 9.0 8.5 10.5 11.0 13.5 11.0 12.0 12.0 18.5 10.5 9.5 11.5 9.5 9.5 11.6 9.5 9.5 9.6 9.7	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 7.0 7.0 6.5 6.5 6.5 4.0 5.0 4.0 6.0	11.0 12.0 13.5 13.5 13.5 9.0 12.0 10.0 10.0 10.0 10.0 10.0 12.5 14.5 14.5 14.0 12.0 12.0	4:0 4:5 5:5 6:5 6:5 6:5 6:5 6:5 6:5 6:5 6:5 6	MAX 15.5 16.0 16.5 15.5 14.5 14.5 14.5 10.0 10.0 10.5 13.5 13.5 13.5 13.5 14.5 16.5 16.5 16.5 16.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 3.0 5.5 6.5 8.0 8.0 8.0 8.0 9.0 9.5	HAX 16.5 18.5 19.0 20.0 20.0 20.0 19.0 19.0 19.0 13.5	9:0 10:0 11:0 11:5 12:5 11:5 12:0 	HAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	HIN	MAX 20.0 19.5 19.0 18.5 15.0 16.5 16.5 16.5 16.5 13.5 13.5 14.5 14.5 14.5 14.5	MIN 14.5 13.5 12.0 13.5 11.0 10.0 10.0 11.5 10.0 9.5 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0
1 2 3 4 4 5 6 7 7 8 9 10 0 11 12 13 14 15 16 17 18 19 20	MAX 6.5 9.0 8.5 10.5 11.0 13.5 9.0 12.0 8.5 10.5 9.0 10.5 9.5 9.5 11.5 11.5 9.0 4.5	MIN 3.5 4.0 4.0 4.0 4.0 7.0 7.0 7.0 7.0 6.5 6.5 4.0 4.0 4.0	HAX 11.0 12.0 13.0 13.5 13.5 13.5 9.0 10.0 10.0 10.0 10.0 10.0 12.5 14.5 14.5 14.5 14.5 14.5 14.5	HIN 4.50 55.55 6.55.55 6.55.00 5.00 5.00 5.00	NAX 15.5 16.0 16.5 15.5 14.0 13.5 11.0 10.0 9.0 11.0 13.5 13.5 13.5 13.5 13.5 13.5 13.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 5.5 6.6 8.0 9.0 9.5 10.0	HAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 19.0 19.0	9.0 10.0 11.0 11.5 12.5 11.5 11.5 11.5 11.5	HAX	HIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0 15.5 16.5 16.5 16.5 13.5 13.6 14.5 14.5 14.5 14.5	MIN 14.5 13.5 12.0 13.5 11.0 10.0 11.5 10.0 9.5 11.0 9.0 9.0 10.0 10.0 10.0 10.0
1 2 2 3 4 5 6 7 7 8 9 10 11 12 13 3 114 15 15 16 17 18 19 20 21 22 23 24	MAX 6.5 9.0 8.5 10.5 11.0 13.5 9.0 12.0 12.0 8.5 10.5 9.0 10.5 9.5 9.5 11.5 11.5 11.5 9.0 10.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 6.5 6.5 6.5 4.0 4.0 6.0 5.0 4.0 6.5 5.0 4.0	HAX 11.0 12.0 12.0 13.5 13.5 9.0 10.0 10.0 10.0 10.0 12.5 14.5 14.5 14.5 14.5 12.0 12.0 12.0 12.0	MIN 4.505.55 0.555.56 8.65.55 5.555.55 5.555.66 6.555	MAX 15.5 16.6 15.5 14.5 14.5 11.0 9.0 11.0 9.0 11.0 10.5 13.5 13.5 15.5 16.5 17.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 6.5 6.6 7.0 8.0 9.0 9.5 10.5 10.5 11.5	HAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 13.5	9:0 10:0 11:0 11:5 12:5 11:5 11:0 12:0 	HAX 21.0 21.0 21.0 21.0 21.0 21.0 20.0 20.0	MIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0 15.5 16.5 16.5 13.5 13.0 13.5 14.5 14.5 14.5 14.5 14.5 11.5 11.5	MIN 14.5 13.5 12.0 13.5 11.0 10.0 11.5 10.0 11.0 9.5 11.0 11.0 9.0 11.0 9.0 10.0 10.0 10.0 1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 16 17 18 19 20 21 22 23	MAX 6.5 9.0 8.5 10.5 11.0 13.5 11.0 12.0 12.0 18.5 10.5 9.5 11.5 9.5 9.5 11.0 9.5 9.5 9.5 9.5 9.5 9.5 9.6 9.5 9.6	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 7.0 6.5 6.5 4.0 4.0 4.0 4.0 6.0 3.5	11.0 12.0 13.5 13.5 13.5 9.0 10.0 8.0 9.0 11.0 10.0 10.0 12.5 14.5 14.5 14.0 12.0 12.0	4.0 4.5 5.5 5 6.5	MAX 15.5 16.0 16.5 15.5 14.5 14.5 14.5 10.0 10.0 11.0 10.5 13.5 13.5 15.5 16.5 16.5 16.5 16.5 16.5 17.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 3.0 5.5 6.5 8.0 8.0 8.0 8.0 10.5	HAX 16.5 18.5 19.0 20.0 20.0 20.0 19.0 19.0 19.0 13.5	9:0 10:0 11:0 11:5 12:5 11:5 12:0 	HAX 21.0 21.0 21.0 21.0 21.0 21.0 21.0 20.5 19.5 21.0 20.0 20.5 21.0 20.0 20.0	HIN	MAX 20.0 19.5 19.0 18.5 15.0 16.5 16.5 16.5 16.5 16.5 13.5 13.5 13.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14	MIN 14.5 13.5 12.0 13.5 11.0 10.0 11.5 10.0 9.5 11.0 11.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 10.0 10
1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 8 19 20 21 22 3 24 25 26	MAX 6.5 9.0 8.5 10.5 11.0 12.0 12.0 12.0 18.5 10.5 10.5 9.5 11.5 9.6 5.5 8.5 11.0 9.0 10.0 11.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 7.0 6.5 4.0 4.0 4.0 6.5 5.5 5.5	11.0 12.0 13.5 13.5 13.5 9.0 10.0 8.0 10.0 10.0 10.0 10.0 12.5 14.5 14.5 14.0 12.0 12.0 12.0	4:0 4:5 5:5 6:5 6:5 6:5 6:5 6:5 6:5 6:5 6:5 6	MAX 15.5 16.0 16.5 15.5 14.5 14.5 11.0 10.0 10.5 13.5 13.5 15.5 16.5 16.5 16.5 16.5 16.5 17.5 17.5 17.5 17.5 17.0 19.0 19.0	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 3.0 7.0 8.0 8.0 8.0 8.0 8.0 10.5 11.0 11.0	HAX 16.5 18.5 19.0 20.0 20.0 20.0 19.0 19.0 19.0 13.5	9:0 10:0 11:0 11:5 12:5 11:5 12:0 12:0 12:0	HAX	HIN	MAX 20.0 19.5 19.0 18.5 15.0 16.5 16.5 16.5 16.5 16.5 13.5 13.5 13.5 14.5 14.5 15.5 12.5 11.0 10.0	MIN 14.5 13.5 12.0 13.5 11.0 10.0 11.5 10.0 9.5 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11
1 2 3 4 5 6 7 8 9 10 11 11 2 13 3 14 4 15 5 16 17 18 19 20 21 22 23 24 25 26 27	MAX 6.5 9.0 8.5 10.5 11.0 13.5 11.0 12.0 8.5 10.5 9.0 12.0 8.5 9.5 9.5 11.5 11.5 11.5 9.0 12.0 9.0 9.0 11.0 9.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 6.5 6.5 6.5 6.5 6.5 5.5 5.5 5.5	HAX 11.0 12.0 12.0 13.5 13.5 9.0 10.0 10.0 10.0 10.0 10.0 12.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14	MIN 4.505.55 0.55.55 0	MAX 15.5 16.6 15.5 14.5 14.5 11.0 9.0 11.0 9.0 11.5 13.5 13.5 15.5 16.5 17.5 17.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 3.0 8.0 8.0 8.0 9.0 9.5 10.5 11.0 11.0	HAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 13.5	9:0 10:0 11:0 11:5 12:5 11:5 12:0 12:0 12:0 12:0	HAX 21.00 21.00 21.00 20.0 20.0 20.0 20.0 2	MIN 14.5 14.0 14.5 13.5 13.5 13.5 13.5 13.5 13.5 13.5 13	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0 15.5 16.5 16.5 16.5 13.5 13.5 14.5 14.0 10.5 11.5 10.0 10.0	MIN 14.5 13.5 12.0 13.5 11.0 10.0 10.0 11.5 10.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.
1 2 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 11 17 18 19 20 21 22 3 24 25 26 27 28	MAX 6.5 9.0 8.5 11.0 13.5 11.0 12.0 8.5 10.5 9.0 10.5 9.5 11.5 9.0 10.0 10.0 10.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 7.0 6.5 4.0 4.0 4.0 6.5 5.5 3.5 3.5	HAX 11.0 12.0 13.0 13.5 13.5 13.5 13.5 14.0 10.0 10.0 10.0 10.0 10.0 12.5 14.5 14.5 14.5 12.0 12.0 12.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14	MIN 4.505.55 0.555.50 0.000 0.000 5.555.5 5.666.57 8.00 6.666.7 8.00 9.00	MAX 15.5 16.6 15.5 14.0 13.5 14.5 11.0 9.0 11.0 9.0 11.5 13.5 13.5 13.5 13.5 13.5 13.5 13.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 3.0 7.0 8.0 8.0 8.0 8.0 8.0 10.5 11.0 11.0 12.0	HAX 16.5 18.5 19.0 20.0 20.0 20.0 19.0 19.0 19.0 19.0 1	9:0 10:0 11:0 11:5 12:5 11:5 12:0 	HAX	HIN	MAX 20.0 19.5 19.0 18.5 15.0 16.5 16.5 16.5 16.5 16.5 17.5 17.5 18.5 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6	MIN 14.5 13.5 12.0 13.5 11.0 10.0 11.5 10.0 9.5 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11
1 2 2 3 4 5 6 7 7 8 9 9 10 0 11 1 12 13 14 15 16 17 18 19 20 21 22 23 24 25 27 28 29 30 30	MAX 6.5 9.0 8.5 10.5 11.0 13.5 11.0 12.0 8.5 10.5 9.0 12.0 8.5 9.5 9.5 11.5 11.5 11.5 9.0 12.0 9.0 9.0 11.0 9.0	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 6.5 6.5 6.5 6.5 6.5 5.5 5.5 5.5	HAX 11.0 12.0 12.0 13.5 13.5 9.0 10.0 10.0 10.0 10.0 10.0 12.5 14.5 14.5 14.5 14.5 14.5 14.5 15.5	MIN 4.505.55 0.55.55 0	MAX 15.5 16.6 16.5 15.5 14.5 11.0 9.0 11.0 9.0 11.0 13.5 13.5 15.5 16.5 17.5 18.5 17.5 19.0 19.0 20.0 15.5 18.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 3.0 8.0 8.0 8.0 9.0 9.5 10.5 11.0 11.0 12.0 11.0	HAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 13.5	9:0 10:0 11:0 11:5 12:5 11:5 12:0 12:0 12:0 12:0	HAX 21.00 21.00 21.00 20.0 20.0 20.0 20.0 2	MIN 14.5 14.0 14.5 13.5 13.5 13.5 13.5 13.5 13.5 13.5 13	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0 15.5 16.5 16.5 16.5 13.5 13.5 14.5 14.0 10.5 11.5 10.0 10.0	MIN 14.5 13.5 12.0 13.5 11.0 10.0 10.0 11.5 10.0 9.0 9.0 9.0 9.0 10.0 10.0 10.0 10.
1 2 3 4 5 6 7 8 9 10 11 12 13 3 14 5 15 5 16 7 18 19 20 21 22 23 24 25 26 27 28 29	MAX 6.5 9.0 8.5 10.5 11.0 13.5 11.0 12.0 8.5 10.5 9.0 12.0 8.5 9.5 11.5 11.5 11.5 11.5 9.0 9.0 9.0 11.0 9.0 9.0 5.0 5.7 7.5	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 6.5 6.5 6.5 6.5 5.5 3.5 3.5	HAX 11.0 12.0 13.0 13.5 13.5 13.5 13.5 14.0 10.0 10.0 10.0 10.0 10.0 12.5 14.5 14.5 14.5 12.0 12.0 12.0 12.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14	MIN 4.505.55 0.555.50 0.000 0.000 5.555.5 5.666.57 8.00 6.666.7 8.00 9.00	MAX 15.5 16.6 15.5 14.0 13.5 14.5 11.0 9.0 11.0 9.0 11.5 13.5 13.5 13.5 13.5 13.5 13.5 13.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.5 3.0 7.0 8.0 8.0 8.0 8.0 8.0 10.5 11.0 11.0 12.0	HAX 16.5 18.5 19.0 20.0 19.0 19.0 19.0 13.5	MIN 9.0 10.0 11.0 11.5 12.5 11.5 12.0	HAX	HIN	MAX 20.0 19.5 19.0 18.5 15.0 11.0 16.5 18.0 15.5 16.5 16.5 16.5 16.5 17.5 18.5 18.6 19.6 19.6 19.6 19.6 19.6 19.6 19.6 19	MIN 14.5 13.5 12.0 13.5 11.0 10.0 11.5 10.0 9.5 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11
1 2 3 4 5 6 7 7 8 9 9 10 0 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 27 28 29 30 30	MAX 6.5 9.0 8.5 10.5 11.0 13.5 11.0 12.0 8.5 10.5 9.0 12.0 8.5 9.5 11.5 11.5 11.5 11.5 9.0 9.0 9.0 11.0 9.0 9.0 5.0 5.7 7.5	MIN 3.5 4.0 4.0 4.0 7.0 7.0 7.0 6.5 6.5 6.5 6.5 5.5 3.5 3.5	11.0 12.0 13.0 13.5 13.5 13.5 12.0 10.0 10.0 10.0 10.0 12.5 14.5 14.5 14.5 14.5 14.5 14.5 15.5 15	MIN 4.505.55 0.555.50 0.000 5.505.55 5.666.55 5.6666.7 8.00 9.00 9.00 9.00 9.00 9.00 9.00 9.00	MAX 15.5 16.6 16.5 15.5 14.5 11.0 9.0 11.0 9.0 11.0 13.5 13.5 15.5 16.5 17.5 18.5 17.5 19.0 19.0 20.0 15.5 18.5	MIN 7.0 8.0 9.0 9.0 9.0 9.5 9.0 9.5 3.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 10.0 11.0 11.	HAX 16.5 18.5 19.0 20.0 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	9:0 10:0 11:0 11:0 12:5 11:5 11:5 11:0 12:0 12:0 12:0 12:0 12:0 12:0 12:0	HAX	HIN	MAX 20.0 19.5 19.0 18.5 15.0 16.5 16.5 16.5 16.5 13.5 13.5 13.5 14.5 14.5 11.5 12.5 11.0 10.0 11.5 11.0 10.0 11.5 11.0 11.0	MIN 14.5 13.5 12.0 13.5 11.0 10.0 11.5 10.0 9.5 11.0 11.0 11.0 11.0 11.0 11.0 11.0 11

#### SEVIER LAKE BASIN 319

# 10191500 SEVIER RIVER BELOW PIUTE DAM, NEAR MARYSVALE, UTAH (Irrigation network station)

LOCATION.--Lat 38°19'55", long 112°11'15", in NW\{38E\} sec. 34, T.28 S., R.3 W., Piute County, at gaging station 0.8 mile downstream from Piute Dam and 8 miles south of Marysvale.

DRAINAGE AREA. -- 2,440 sq mi, approximately.

PERIOD OF RECORD. -- Chemical analyses: March 1958 to September 1959, February 1961 to September 1970.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

			CHEMICAL	ANALYSES,	WATER Y	EAR OCTOBER	1969 TO	SEPTEMBER	1970			
DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIQ2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SCLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA)	SIUM B	ONATE BO	CO3) (:	FATE R	HLQ- IDE CL} MG/L)	DIS- SOLVEC FLUO- RIDE (F) (MG/L)
20	1030	79				A23		246	6	13	12	
NOV. 20	1335	52				A31		271	0	24	12	
18	1355	38	18	30	30	27	3.9	272	0	23	12	.5
JAN. 30	1020	201	20	48	25	24	3.8	294	0	22	12	.5
FEB. 26	1300	12	18	45	21	24	3.7	276	0	20	11	.3
MAR . 30	1035	273	20	42	22	23	3.9	270	0	19	10	.4
APR. 21 May	1250	456	18	39	24	23	2.9	268	0	22	11	. 3
25 JUNE	1055	155	19	39	23	26	3.9	264	0	24	12	.4
17 JULY	1415	18	19	37	20	29	3.5	244	0	24	13	.4
15 AUG.	1100	594	19	43	22	27	4.3	268	0	30	12	•4
17	1300	487	28	49	28	28	4.9	262	0	35	14	•5
SEP. 14	0915	177	23	43	26	31	5.6	268	0	36	13	• 2
QATE	NITRAT (N) (MG/L	18	ED (RES	ED SOLVE DS SOLIE I- (SUM ( AT CONST C) TUENT	ED DIS DS SOLV DF SOLV I- (TDI S) PEF	TED SOLVED DS SOLIDS IS (TONS PER			SODIUM AD- Sorp- Tion Ratio	SPECI- FIC CDND- UCTANCE (MICRO- MHOS)	PH {UNIT	
CCT.												
NOV.						38 60.4	192		0.7	457		.4
20				•••		38 38.9	196		1.0	468		.6
JAN.						39 29.5	200		.8	463		•6
30 FEB.						41 163	222		.7	489		.8 .0
26 FAR.						40 9.49		_		459		•0
APR.						36 195	194			447		
21						40 360	196			452		•5
JUNE						.41 126 .38 13.6	192		.8 1.0	461 438		•2 •1
17 JULY							200		.8	430		.6
AUG.												.1
17 SEP. 14		, 				.40 388 .45 158	216		.8	484 510		•1
	•							. •	• • •	510	•	

A SODIUM (NA) PLUS POTASSIUM (K).

320 SEVIER LAKE BASIN

# 10224000 SEVIER RIVER NEAR LYNNDYL, UTAH (Irrigation network station)

LOCATION.--Lat 39°30', long 112°24', in SE<sup>†</sup><sub>4</sub> sec.23, T.15 S., R.5 W., Millard County, at bridge on county road, 1.5 miles upstream from gaging station and about 2 miles south of Lynndyl.

DRAINAGE AREA. -- 6,270 sq mi, approximately (at gaging station).

PERIOD OF RECORD. -- Chemical analyses: March 1951 to September 1969 (daily), October 1969 to September 1970 (monthly).
Water temperatures: March 1951 to September 1970.

EXTREMES. --1969-70:

Specific conductance: Maximum daily, 4,610 micromhos Dec. 31, Jan. 2; minimum daily, 1,430 micromhos Nov. 23-25. Water temperatures: Maximum, 25.0°C Aug. 3-6; minimum, 1.0°C on many days during December and January.

Period of record:
Dissolved solids (1951-69): Maximum, 5,980 mg/l Dec. 25-27, 1962; minimum, 275 mg/l Feb. 3-11, 1962.
Hardness (1951-69): Maximum, 1,970 mg/l Dec. 29, 30, 1962; minimum, 188 mg/l Feb. 3-11, 1962.
Hardness (1951-69): Maximum daily, 8,300 micromhos Dec. 27, 1962; minimum daily, 431 micromhos Feb. 4, 1962.
Specific conductance: Maximum daily, 8,300 micromhos Dec. 27, 1962; minimum daily, 431 micromhos Feb. 4, 1962.
Water temperatures: Maximum, 29.5°C July 21-23, 1956, Aug. 9, 10, 1963; minimum, 1.0°C on many days during winter periods.

REMARKS.--Discharges are adjusted to compensate for inflow from deep well discharging to the river between the sampling point and the gaging station.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SDLVED MAG- NE- Slum (MG) (MG/L)	SDDIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUG- RIDE (F) (MG/L)
NOV.							-04	0	198	255	.5
25	78	13	64	80	145	4.6	2 96	U	140	233	• • •
JAN. 26	11	13	116	141	585	8.2	376	0	740	790	.7
APR.		.,				***					
29	164	19	71	77	261	6.4	344	0	347	320	.5
MAY							220	•	301	305	.6
26	724	14	66	74	243	3.2	339	0	301	303	•0
JUNE 24	555	14	61	75	240	7.7	337	0	290	292	•6
JULY											
30	192	12	60	73	243	6.7	319	7	294	301	• B
AUG.								20	305	295	.5
25 SEP.	284	9.2	58	76	240	6.9	283	20	305	293	• -
24	38	8.9	79	96	386	8.8	346	0	480	480	.5

DATE	NITRATE (ND3) (MG/L)	DIS- SOLVED BORON (8) (UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SDLVED SOLIDS (TDNS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NDN- CAR- BDNATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	
NOV.						204	490	247	1540	8.0	
25	2.4	170	970	909	1.32	204	490	241	1740	5.0	
JAN.							870	562	3980	8.1	
26	1.8	640	2760	2580	3.51	82.0	870	202	3700	0.1	
APR.						576	496	214	2000	8.2	
29	1.7	350	1300	1270	1.73	210	770	214	2000		
MAY						2480	470	192	1940	8.2	
26	2.1	390	1270	1180	1.60	2400	410	172	1,,,		
JUNE			1220	1150		1840	460	184	1910	8.3	
24	1.5	370	1230	1150	1.56	1040	400	104	.,		
JULY		270	1180	1160	1.58	612	450	176	1860	8.5	
30	1.1	370	1100	1160	1.00	012	.,,	• , •			
AUG.		340	1180	1150	1.56	905	456	191	1870	8.5	
25	1.2	340	1150	1150	1.30	703	470				
SEP.	2.4	480	1780	1710	2.33	184	592	308	2690	8.2	
24	2.4	460	1,00	1710	2.33	104	,,,				

DIS- DIS-

## SEVIER LAKE BASIN 321

## 10224000 SEVIER RIVER NEAR LYNNDYL, UTAH--Continued

## SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

2 3 4 5 6 7 8 9 10 11 12 13 14 15	2000 2010 2000 1810 1810 1800 1670 1740 1740 1740 1840 1850 1860 1890 1860	1740 1750 1750 1710 1710 1710 1710 1720 1720 1720 172	2140 1860 1830 1790 1820 1600 1590 1690 1720 1730 1730 1760	4520 4610 4570 4520 4530 4510 4430 4490 3780 3780 3760 3700	4080 2040 1780 1770 1760 1760 1760 1760 1760 1760 1830 1800	1740 1800 1820 1920 1820 1820 1810 1820 1810	1920 1920 1900 1930 1930 1930 1920 1930 1900 1910	1960 1970 2070 1910 1910 1910 1980 1980 1970 1990	1930 1940 1930 1940 1940 1930 1930 1920 2180	1840 1840 1850 1850 1850 1850 1850 1850 1850	1930 1910 1930 1870 1930 1930 1880 1870 1870 1890	2130 2130 1960 1950 1940 1930 1940 2060 2070 2060
3 4 5 6 7 8 9 10 11 12 13 14 15	2 000 1810 1800 1670 1740 1740 1740 1740 1850 1860 1890	1750 1710 1710 1710 1710 1710 1720 1720 172	1830 1790 1820 1620 1690 1690 1720 1730 1730 1760	4570 4520 4530 4510 4430 4490 3780 3780 3760 3700	1780 1770 1760 1770 1760 1760 1750 1760	1820 1920 1820 1820 1810 1820 1820 1810	1900 1930 1930 1920 1930 1900 1910	2070 1910 1910 1910 1980 1980 1970 1990	1930 1940 1940 1940 1930 1930 1920 2180	1850 1850 1850 1850 1850 1850 1850 1820	1930 1870 1930 1930 1880 1870 1870	1966 1956 1946 1936 1946 2066 2076
4 5 6 7 8 9 10 11 12 13 14 15	1810 1800 1870 1670 1740 1740 1740 1840 1850 1860 1890	1710 1710 1710 1710 1720 1720 1720 1720	1790 1820 1820 1600 1590 1690 1720 1730 1730 1760	4520 4530 4510 4430 4490 3780 3780 3760 3700	1770 1760 1770 1760 1760 1750 1760	1920 1820 1810 1810 1820 1820 1810	1930 1930 1920 1930 1900 1910	1910 1910 1910 1980 1980 1970	1940 1940 1930 1930 1920 2180	1850 1850 1850 1850 1850 1850	1870 1930 1930 1880 1870 1870	1956 1946 1946 2066 2076
5 6 7 8 9 10 11 12 13 14 15	1800 1670 1740 1740 1740 1840 1850 1860 1890	1710 1710 1710 1720 1720 1720 1720 1710 171	1820 1600 1590 1690 1720 1730 1730 1760	4530 4510 4430 4490 3780 3780 3760 3700	1760 1770 1760 1760 1750 1760	1820 1810 1810 1820 1820 1810	1930 1920 1930 1900 1910 1910	1910 1910 1980 1980 1970 1970	1940 1930 1930 1920 2180	1850 1850 1850 1850 1850	1930 1930 1880 1870 1870	1946 1946 2066 2076
6 7 8 9 10 11 12 13 14 15	1800 1670 1740 1740 1740 1740 1840 1850 1860 1890	1710 1710 1720 1720 1720 1720 1710 1710	1820 1600 1590 1690 1720 1730 1730 1760	4510 4430 4490 3780 3780 3760 3700	1770 1760 1760 1750 1760	1820 1810 1820 1820 1810	1920 1930 1900 1910 1910	1910 1980 1980 1970 1990	1930 1930 1920 2180	1850 1850 1850 1820	1930 1880 1870 1870	193 194 206 207
7 8 9 10 11 12 13 14 15	1670 1740 1740 1740 1740 1840 1850 1860 1890	1710 1720 1720 1720 1720 1720 1710 1710	1600 1590 1690 1720 1730 1730 1760	4430 4490 3780 3780 3760 3700	1760 1760 1750 1760	1810 1820 1820 1810	1930 1900 1910 1910	1980 1980 1970 1990	1930 1920 2180	1850 1850 1820	1880 1870 1870	1944 2066 2076
8 9 10 11 12 13 14 15	1740 1740 1740 1840 1850 1860 1890	1720 1720 1720 1720 1710 1710 1710	1590 1690 1720 1730 1730 1760	4490 3780 3780 3760 3700	1760 1750 1760	1820 1820 1810	1900 1910 1910	1980 1970 1990	1920 2180	1850 1820	1870 1870	20 <b>6</b> 20 <b>7</b>
9 10 11 12 13 14 15	1740 1740 1840 1850 1860 1890	1720 1720 1720 1710 1710 1740	1690 1720 1730 1730 1760	3780 3780 3760 3700	1750 1760 1830	1820 1810 1990	1910 1910	1970 1990	2180	1820	1870	207
10 11 12 13 14 15	1740 1840 1850 1860 1890	1720 1720 1710 1710 1740	1720 1730 1730 1760	3760 3760 3700	1760 1830	1810 1990	1910	1990				
11 12 13 14 15	1840 1850 1860 1890	1720 1710 1710 1740	1730 1730 1760	3760 3700	1830	1990			2180	1850	1890	206
12 13 14 15	1850 1860 1890	1710 1710 1740	1730 1760	3700								
13 14 15	1860 1890	1710 1740	1760				1980	1970	2180	1850	1880	210
14 15 16	1890	1740				1980	1980	1970	2180	1860	1890	209
15 16				3700	1760	1990	1970	1970	2180	1850	1870	211
16	1860		1760	3750	1760	2000	1980	1970	2180	1870	1870	212
		1720	2650	3060	1940	1990	1970	1980	2170	1870	1880	211
	2030	1750	2700	3060	1960	2010	1970	1970	1890	1870	1890	209
	2040	1750	2700	3050	1770	1990	1980	1970	1900	1870	1900	239
	2170	1740	2700	3020	1760	2010	1970	1970	1900	1870	1880	241
	2180 2180	1730 1740	2700 3150	3380 3410	1760 1760	2020 2010	1970 1980	1940 1930	1890 1880	1820 1830	1890 2010	240 239
	2180	1740	3150	3410	1760	2010	1980	1930	1000	1030	2010	
	1960	1460	3140	3690	1760	2020	2160	1930	1890	1820	2010	239
	1960	1450	3160	3700	1740	1990	2140	1950	1890	1820	1990	240
	1940	1430	3190	3690	1760	1990	2140	1950		1830	1990	241
	1800	1430	3170	3690	1760	1980	2140	1950		1830	2010	293
25	1780	1430	3170	3920	1780	1980	2140	1940		1830	2010	293
	1780	2140	3170	3920	1770	1990	2140	1940		1830	2010	300
	1730	2160	3160	3980	1750	1930	2160	1930		1870	2010	300
	1770	2160	3580	4100	1740	1990	2150	1940		1870	2010	230
	1780	2160	3600	4050		1990	2150	1930		1870	1990	227
	1800 1790	2160	3530 4610	4000		1990 1990	1970	1930		1860 1850	2110	227
91	1790		4610	4100		1990		1940		1850	2150	
AVG	1880	1750	2550	3890	1870	1940	2010	1960		1850	1940	228

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	nc T	NDV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
ı	19.0	9.0	3.0	1.0	3.0	8.0	7.0	11.0	17.0	21.0	24.0	22.0
2	14.0	9.0	2.0	1.0	5.0	8.0	8.0	14.5	17.0	21.0	24.0	20.0
3	9.0	9.0	2.0	1.0	5.0	8.0	8.0	18.0	17.0	21.0	25.0	20.0
4	11.0	7.0	2.0	1.0	6.0	8.0	8.0	16.0	17.0	22.0	25.0	20.0
5	12.0	7.0	1.0	1.0	6.0	7.5	.10.0	16.0	17.0	22.0	25.0	20.0
6	12.0	7.0	1.0	1.0	8.0	7.5	12.0	16.0	17.0	22.0	25.0	16.0
7	12.0	7.0	1.3	1.0	8.0	7.5	12.0	12.0	17.0	22.0	24.0	14.0
8	12.0	7.0	1.0	1.0	8.0	7.5	12.0	12.0	17.0	22.0	24.0	20.0
9	11.0	7.0	1.0	1.0	8.0	7.5	12.0	12.0	17.0	22.0	24.0	20.0
10	8.0	7.0	1.0	1.0	8.0	7.5	12.0	12.0	17.0	22.0	24.0	20.5
11	10.0	7.0	1.0	1.0	8.0	8.0	12.0	12.0	17.0	22.0	24.0	19.0
12	10.0	7.0	3.0	1.0	8.0	8.0	12.0	13.0	17.0	22.0	24.0	19.0
13	8.0	7.0	2.0	1.0	8.0	9.0	9.0	13.0	17.0	24.0	24.0	18.0
14	8.0	6.0	2.0	1.0	8.5	9.0	9.0	13.0	20.0	24.0	22.0	18.0
15	8.0	6.0	3.0	1.0	8.5	8.0	9.0	13.0	20.5	24.0	22.0	16.0
16	10.0	5.0	3.0	1.0	7.0	8.0	11.0	16.0	20.0	24.0	22.0	16.0
17	10.0	3.0	3.0	1.0	8.0	8.0	11.0	16.0	20.5	24.0	22.0	16.0
18	10.0	2.0	4.0	2.0	8.0	8.0	9.0	16.0	21.0	24.5	22.0	16.0
19	10.0	2.0	4.0	4.0	8.0	8.0	10.9	17.0	21.0	24.0	22.0	16.0
50	10.0	4.0	3.0	7.0	8.0	8.0	9.0	17.0	21.0	24.0	24.0	16.0
21	11.0	4.0	3.7	7.3	8.0	8.0	9.0	17.0	21.0	24.0	24.0	16.0
22	11.0	4.0	3.0	7.0	9.0	7.5	9.0	17.0	22.0	24.0	24.0	16.0
53	12.0	4.0	3.0	7.0	9.0	7.5	9.0	17.0	22.0	24.0	24.0	16.0
24	10.0	4.0	3.0	6.5	9.0	7.5	9.0	17.0	22.0	24.0	24.0	14.0
25	10.0	4.0	3.0	7.0	10.0	7.5	9.0	17.0	20.0	22.0	24.0	14.0
26	10.0	3.0	3.0	7.0	10.5	6.5	8.0	17.0	20.0	22.0	24.0	16.0
27	10.0	3.0	2.0	5.0	9.0	6.0	8.0	17.0	20.0	22.0	24.0	17.0
28	9.0	3.0	2.0	1.5	9.0	6.0	8.0	17.0	20.0	22.0	24.0	16.0
29	9.0	3.0	1.0	2.0		6.0	8.0	17.0	20.0	22.0	24.0	16.0
30	10.0	3.0	1.0	1.5		6.0	9.0	17.0	20.0	22.0	24.0	16.0
31	10.0		2.0	3.0		6.0		17.0		22.0	24.0	
AVG	10.5	5.5	2.3	2.5	8.0	7.5	9.5	15.0	19.0	22.5	23.5	17.5

322 STEPTOE VALLEY

# 10244950 STEPTOE CREEK NEAR ELY, NEV. (Hydrologic bench-mark station)

LOCATION. --Lat 39°12'05", long 114°41'15", in NW4SW1 sec. 32, T.16 N., R.65 E., White Pine County, at gaging station on left bank, 0.1 mile downstream from Clear Creek, 0.8 mile upstream from Cave Creek, and 11 miles east-southeast of Ely.

DRAINAGE AREA. -- 11.1 sq mi.

PERIOD OF RECORD, --Chemical analyses: October 1967 to September 1970. Water temperatures: October 1966 to September 1970, Sediment records: February 1968 to September 1970 (partial records).

EXTREMES. -- 1969-70:
Water temperatures: Maximum, 10.5°C May 3, 15, 16; minimum, 4.0°C Jan. 28, 29.

Period of record:
Water temperatures: Maximum, 11.0°C on many days in May, July and August of most years; minimum, 3.0°C Feb. 21, 1988.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SIO2) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- Sium (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
23	1000	6.4	6.1	6.5	49	11	1.7	.5	196	0	8.0	1.0
NOV. 24	0930	5.3	5.0	6.5	43	11	1.7	.4	198	0	8.0	.7
DEC. 29	1525	3.9	6.0	6.4	49	11	1.9	.5	194	0	7.0	.4
JAN. 27	1415	4.3	5.0	6.8	47	11	1.9	. 4	198	0	7.0	.9
MAR. 10	1420	4.0	6.0	6.8	48	11	1.8	•5	188	0	15	.8
APR. 23	1340	4.2	8.5	7.0	49	11	1.9	.5	194	0	8.0	1.0
NAY 27	0830	3.8	6.5	6.8	44	8.2	1.7	.5	163	0	11	1.0
JUNE 25	1800	9.3	8.0	6.3	47	7.8		.3	179	o	7.0	•5
JUL Y 27	1105	6.1	8.0	6.6	45	9.6	1.8	.3	180	0	6.0	.4
AUG . 26	1415	4.4	9.5	6.5	45	10	1.6	.5	182	0	7.0	.6
SEPT. 22	1545	4.4	8.5	6.5	50	9.7	1.9	•5	190	0	7.0	1.2
DATE	FLUO- RIDE (F) (MG/L)	NITRATE (N(3) (MG/L)	80R0N (8) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	OIS- SOLVEO SOLIDS (TONS PER AC-FT)	HARO- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	PERCENT SODI UM	ALKA- LINITY AS CAC 03 (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
DCT.	RIDE (F) (MG/L)	(N(3) (MG/L)	(8) (UG/L)	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVEO SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	SODIUM	LINITY AS CACO3 (MG/L)	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
DCT. 23 NOV.	RIDE (F) (MG/L)	(N()3) (MG/L)	(8) (UG/L) 0	SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	SOLVEO SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	SOD 1 UM 2	LINITY AS CACO3 (MG/L)	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 8.0
DCT. 23 NOV. 24 DEC.	RIDE (F) (MG/L)	(N(J3) (MG/L) -6	(8) (UG/L) 0 90	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOL VEO SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L) 168 152	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	2 2	LINITY AS CAC 03 (MG/L) 161 162	FIC COND- UCTANCE (MICRO- MHOS) 314 318	8.0 7.9
DCT. 23 NOV. 24 DEC. 29 JAN.	**RIDE (F) (MG/L) **1 **1 **2	(NU3) (MG/L) .6 .8	(8) (UG/L) 0 90 30	SDLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 175 169	SOL VEO SOL IOS (TONS PER AC-FT) .24 .23	NESS (CA,MG) (MG/L) 168 152	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	2 2 2 2	LINITY AS CAC 03 (MG/L) 161 162 159	FIC COND- UCTANCE (MICRO- MHOS) 314 318	8.0 7.9 7.9
DCT. 23 NOV. 24 DEC. 29 JAN. 27	**RIDE (F) (MG/L) **1 **1 **2 **1	(N(J3) (MG/L) -6	(8) (UG/L) 0 90	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOL VEO SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L) 168 152	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	2 2	LINITY AS CAC 03 (MG/L) 161 162	FIC COND- UCTANCE (MICRO- MHOS) 314 318	8.0 7.9
DCT. 23 NOV. 24 DEC. 29 JAN. 27	**RIDE (F) (MG/L) **1 **1 **2	(NU3) (MG/L) .6 .8	(8) (UG/L) 0 90 30	SDLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 175 169	SOL VEO SOL IOS (TONS PER AC-FT) .24 .23	NESS (CA,MG) (MG/L) 168 152	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	2 2 2 2	LINITY AS CAC 03 (MG/L) 161 162 159	FIC COND- UCTANCE (MICRO- MHOS) 314 318	8.0 7.9 7.9
DCT. 23 NOV. 24 DEC. 29 JAN. 27 MAR. 10 APR. 23	**RIDE (F) (MG/L) **1 **1 **2 **1	(N(13) (MG/L) -6 -8 1.0	(8) (UG/L) 0 90 30	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 175 169 173 168	SOL VEO SOL IOS (TONS PER AC-FT) -24 -23 -24	NESS (CA,MG) (MG/L) 168 152 168 162	CAR- BONATE HARD- NESS (MG/L)	AD- SORP- TION RATIO	2 2 2 2 2	LINITY AS CAC 03 (MG/L) 161 162 159	FIC COND- UCTANCE (MICRO- MHOS) 314 318 315	(UNITS)  8.0  7.9  7.9  7.8
DCT. 23 NOV. 24 DEC. 29 JAN. 27 MAR. 10 APR. 23 MAY	**RIDE (F) (MG/L) **1 **-1 **-2 **-1 **-0	(NU3) (MG/L) .6 .8 1.0	(8) (UG/L) 0 90 30 0	SDLVED SDLIDS (SUM OF CONSTI- TUENTS) (MG/L) 175 169 173 168	SOL VEO SOL 10S (TONS PER AC-FT) -24 -23 -24 -23 -24	NESS (CA,MG) (MG/L) 168 152 168 162 165	CAR- BONATE HARD- NESS (MG/L) 7 0 9	AD- SORP- TION RATIO	2 2 2 2 2 2	LINITY AS CACO3 (MG/L) 161 162 159 154	FIC COND- UCTANCE (MICRO- MHOS) 314 318 315 312	(UNITS)  8.0  7.9  7.9  7.8  8.0
DCT. 23 NOV. 24 DEC. 29 JAN. 27 MAR. 10 APR. 23 MAY 27 JUNE 25	**RIDE (F) (MG/L)  **1  **1  **2  **1  **0  **1	(NJ3) (MG/L) .6 .8 1.0 .8	(8) (UG/L) 0 90 30 0 30	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 175 169 173 168 178	SOL VEO SOL 10S (TONS PER AC-FT) -24 -23 -24 -23 -24	NESS (CA,MG) (MG/L) 168 152 168 162 165 168	CAR- BONATE HARD- NESS (MG/L) 7 0 9 8	AD- SORP- TION RATIO	2 2 2 2 2 2 2	LINITY AS CAC 03 (MG/L) 161 162 159 154 154	FIC COND- UCTANCE (MICRO- MHOS) 314 318 315 312 311	(UNITS)  8.0  7.9  7.9  7.8  8.0  7.9
DCT. 23 NOV. 24 DEC. 29 JAN. 27 MAR. 10 APR. 23 MAY 27 JUNE 25 JULY 27	RIDE (F) (MG/L) -1 -1 -2 -1 -0 -1	(NIJ3) (MG/L) .6 .8 1.0 .8 	(8) (UG/L) 0 90 30 0 30 0	SOLVEO SOLIDS (SUM OF CONSTITUENTS) (MG/L) 175 169 173 168 178 174	SDL YEO SDL 10S (1TDNS PER AC-FT) .24 .23 .24 .24 .24 .21	NESS (CA,MG) (MG/L) 168 152 168 162 165 168 144	CÁR- BONATE HARD- NESS (MG/L) 7 0 9 8 11	AD- SORP- TION RATIO	2 2 2 2 2 2 2 2 2	LINITY AS CAC 03 (MG/L) 161 162 159 154 154 159	FIC COND- UC TANCE (MICRO- MHOS) 314 318 315 312 311 313 272	(UNITS)  8.0  7.9  7.9  7.8  8.0  7.9  8.0
DCT. 23 NOV. 24 DEC. 29 JAN. 27 MAR. 10 APR. 23 MAY 27 JUNE 25 JULY	RIDE (F) (MG/L) -1 -1 -2 -1 -0 -1	(NI3) (MG/L) -6 -8 1-0 -8 	(8) (UG/L) 0 90 30 0 30 0	SOLVED SOLLIOS (SUM OF CONSTITUENTS) (MG/L)  175  169  173  168  174  155	SOL VEO SOL 10S SOL 10S SOL 10S (170NS PER AC-FT)	NESS (CA,MG) (MG/L) 168 152 168 162 165 168 144	CAR- 80NATE HARD- NESS (MG/L) 7 0 9 8 11 9	AD- SORP- TION RATIO -1 -1 -1 -1 -1 -1	2 2 2 2 2 2 3	LINITY AS CACO3 (46/L)  161 162 159 154 154 159 134	FIC COND- COND- UCTANCE (MICRO- MHOS) 314 318 315 312 311 313 272 284	(UNITS)  8.0  7.9  7.9  7.8  8.0  7.9  8.0  7.7

#### STEPTOE VALLEY

# 10244950 STEPTOE CREEK NEAR ELY, NEV.--Continued CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TOTAL PHOS- PHORUS AS PO4 (MG/L)	ORTHO PHOS- PHATE (PD4) (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRD- GEN (N) (MG/L)
OCT.					
23 NOV.	.03	.03	•00	.33	• 33
24	•00	•00	• 05	-14	.19
DEC.					
29	.06	•06		.20	
JAN. 27	. 07	+02	.04	-01	• 02
MAR.	.01	•02	.04	•01	• 02
10	.15	•09	•00	1.2	1.2
APR.					
23	.43	•33	. 04	•09	.12
25	.48	.43	.04	1.0	1.0
JULY					
27	.57	-51	.08	-04	.10
AUG. 26	-05	•02	.00	.24	.24
SEPT.	.05	•02	•00	4	. 24
22	. 04	.01	.06	.12	.17

## SPECTROGRAPHIC ANALYSES

DATE	ALU- MINUM (AL)	IRON (FE)	MAN- GANESE (MN)	MOLYB- Denum (MO)	NICKEL (NI)	VANA- DIUM (V)	ZINC (ZN)	BIS- MUTH (BI)	CAD- Mium (CD)
MAY 27	<3.3	5.9	<3.3	<.7	<.7	<.7	<.13	<.7	<3.3
DATE	CO- BALT (CO)	COP- PER (CU)	CHRO- Mium (Cr)	GAL- LIUM (GA)	GERMA NIUM (GE)	LEAD (PB)	TIT NIU (TI	M LIUM	
MAY	c3.3	c3.3	٤3.3	c1 3	4.7	c3.3	۷1.	a (1.	a

## RADIOCHEMICAL ANALYSES

		DISS	OLVED		IN SUSPEND	ED SEDIMENTS	
DATE OF COLLECTION	URANIUM (UG/L)	RADIUM (PC/L)	GROSS ALPHA (UG/L)	GROSS BETA (PC/L)	GROSS Alpha (PC/L)	GROSS BETA (PC/L)	
FEB. 02 AUG.	•27	•07	5.7	1.1	1.2	1.3	
17	• 4	• OB	<2.5	1.2	.9	•6	

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	DATE	TIME	WATER TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/CAY)
	23, 1970	1340	8.5	4.2	27	.31
MAY	27	0830	6.5	8.8	38	•90
JUN	24	1830	8.0	9.3	17	.43
16.0	27	1105	8-0	6.1	11	- 18

## STEPTOE VALLEY

## 10244950 STEPTOE CREEK NEAR ELY, NEV .-- Continued

## TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		• •	LINCKATORE				ou ropen z					
DAY	00	T	NO	v	DE	С	AL	N	FE	8	M.A	R
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.5	8.0	7.0	6.0	5.5	5.0	5.0	4.5	5.0	4.5	6.0	5.0
2	9.0	7.0	7 . G	5.5	5.5	5.0	5.5	4.5	5.0	4.5	6.0	4.5
3	8.0	6.5	7.0	6.0	5.5	5.0	5.5	4.5	5.5	4.5	5.5	4.5
4	7.C	6.5	7.0	6.0	5.0	4.5	5.5	4.5	5.5	5.0	5.5	4.5
5	8.0	6.0	7.0	6.0	5.0	4.5	5.5	4.5	6.0	5.0	6.0	4.5
6	8.5	6.0	6.5	6.0	5.5	4.5	5.5	4.5	6.0	5.5	6.0	4.5
7	9.0	6.5	6.5	5.5	5.5	5.0	5.5	4.5	6.0	5.0	6.5	5.0
8	8.0	6.5	6.5	6.0	5.5	5.0	5.5	4.5	6.0	5.0	6.5	5.0
9	8.5	7.0	7.0	6.0	5.5	4.5	5.5	4.5	6.0	5.0	5.5	4.5
10	7.0	6.C	6.5	5.5	5.0	4.5	5.5	4.5	6.5	5.5	6.0	4.5
11	7.0	6.0	6.5	5.5	5.5	5.0	5.5	5.0	6.5	5.5	6.0	4.5
12	7.C	6.0	6.5	5.5	5.5	5.0	5.5	5.0	6.0	5.5	6.5	4.5
13	8.0	6.0	6.5	5.5	5.5	5.0	5.5	4.5	5.5	4.5	8.0	5.0
14	6.5	6 • C	6.0	5.0	5.5	5.0	5.5	5.0	6.0	4.5	6.0	5.0
15	7.0	6.0	6.0	5.5	5.5	5.0	5.0	5.0	5.5	4.5	5,5	4.5
16	8.5	6.5	6.0	5.0	5.5	5.0	5.5	5.0	6.0	5.0	7.0	4.5
17	8.C	7.0	5.0	4.5	5.5	5.0	5.5	5.0	5.5	4.5	5.5 5.5	4.5 4.5 4.5
18	7.0	6.5	5.5	4.5	6.0	5.0	5.5	5.0	6.0	4.5	5.5	4.5
19	7.0	6.5	5.5	4 • 5	6.0	5.5	5.5	5.0	5.5	4.5	5.5	4.5
20	7.0	5.5	6.0	5.0	5.5	5.0	5.5	5.5	5.5	4.5	5.5	4.5
21	8.0	5.5										
22	8.C	5.5	6.0 5.5	5.0 4.5	6.0 5.0	5.0 4.5	6.0 6.0	5.5 5.5	5.5 6.0	5.0 5.0	7.0 7.0	4.5 4.5
23	8.0	6.0	5.5	4.5	5.5	4.5	6.0	5.5	6.0	4.5	8.0	5.0
24	8.0	6.5	6.5	5.0	5.5	4.5	6.0 6.0	5.0	6.0	5.0	8.0	5.0
25	8.0	6.0	6.0	5.0	5.5	4.5	5.5	5.0	6.5	4.5	7.0	4.5
26	8 • C	6.5	5.5	5.0	5.5	4.5	5.5	5.0	6.0	5.0	5.5	4.5
27	7.0	6.5	5.5	4.5	5.5	4.5	5,5	5.0	6.0	5.0	6.0	4.5
28	7.0	6.0	5.5	4.5	5.5	4.5	5.0	4.0	5.5	5.0	6.0	4 • 5
29 30	6.5	5.5	5.0	4.5	5.5	5.0	5.5	4.0			6.D	4.5
31	7.0	5.5	5.5	4.5	5.5	5.0	5.5	4.5			5.5	4.5
31	7.0	5.5			5.5	5.0	5.5	4.5			6.0	4.5
AVG	7.6	6.2	6.1	5 • 2	5.4	4.8	5.5	4.7	5.8	4.8	6.2	4,6
DAY	АР	R	МА	Y	JU	N	JU	L	AU	G	\$ E	Р
DAY						-						
DAY	AP Max	R Min	MAX	Y MIN	JU Max	N MIN	JU MAX	L Min	AU MAX	G MIN	S E Max	P MEN
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MEN	MAX	MIN	MAX	MIN
1	MAX 6.0	MIN 4.5	MAX 9.5	MIN 5.0	MAX 9.5	MIN 6.0	MAX 9.0	MIN 6.5	MAX 9.5	MIN 7.0	MAX 9.5	MEN 7.0
1 2	MAX 6.0 8.0	MIN 4.5 4.5	9.5 10.0	MIN 5.0 5.0	MAX 9.5 9.5	MIN 6.0 6.0	MAX 9.0 9.0	MIN 6.5 6.5	9.5 10.0	MIN 7.0 7.0	MAX 9.5 9.5	MIN 7.0 7.0
1 2 3	MAX 6.0 8.0 7.0	MIN 4.5 4.5 4.5	9.5 10.0 10.5	MIN 5.0 5.0 5.5	9.5 9.5 9.5	MIN 6.0 6.0 6.5	9.0 9.0 9.0	MIN 6.5 6.5 7.0	9.5 10.0 9.5	MIN 7.0 7.0 8.0	9.5 9.5 9.5	7.0 7.0 7.0
1 2	MAX 6.0 8.0 7.0 8.0	MIN 4.5 4.5 4.5	9.5 10.0 10.5 10.0	MIN 5.0 5.0 5.5 6.0	9.5 9.5 9.0 9.0	MIN 6.0 6.0 6.5 6.5	9.0 9.0 9.0 9.5 9.0	MIN 6.5 6.5 7.0 7.0	9.5 10.0 9.5 9.0	7.0 7.0 8.0 8.0	9.5 9.5 9.5 9.5 9.5	7.0 7.0 7.0 7.0
1 2 3 4	MAX 6.0 8.0 7.0 8.0 8.5	MIN 4.5 4.5 4.5 4.5	9.5 10.0 10.5 10.0	MIN 5.0 5.0 5.5	9.5 9.5 9.5	MIN 6.0 6.0 6.5	9.0 9.0 9.0 9.5 9.0 9.0	MIN 6.5 6.5 7.0	9.5 10.0 9.5	7.0 7.0 8.0 8.0	9.5 9.5 9.5 9.5 9.5	7.0 7.0 7.0 7.0 7.0
1 2 3 4 5	6.0 8.0 7.0 8.0 8.5	MIN 4.5 4.5 4.5 4.5 4.5	9.5 10.0 10.5 10.0 10.0	MIN 5.0 5.0 5.5 6.0 6.0	9.5 9.5 9.0 9.0 7.0	MIN 6.0 6.0 6.5 6.5 6.5	9.0 9.0 9.0 9.5 9.0 9.0	MIN 6.5 6.5 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0	7.0 7.0 8.0 8.0 8.5	9.5 9.5 9.5 9.5 7.0	7.0 7.0 7.0 7.0 7.0 6.5
1 2 3 4 5	MAX 6.0 8.0 7.0 8.0 8.5	MIN 4.5 4.5 4.5 4.5 4.5 4.5	9.5 10.0 10.5 10.0 10.0	MIN 5.0 5.0 5.5 6.0 6.0	9.5 9.5 9.0 9.0 7.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5	9.0 9.0 9.0 9.5 9.0 9.0	MIN 6.5 6.5 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0	MIN 7.0 7.0 8.0 8.0 8.5	9.5 9.5 9.5 9.5 7.0 7.0	7.0 7.0 7.0 7.0 7.0 6.5
1 2 3 4 5	MAX 6.0 8.0 7.0 8.0 8.5 9.0 8.5	MIN 4.5 4.5 4.5 4.5 4.5 5.0 5.0	9.5 10.0 10.5 10.0 10.0	MIN 5.0 5.5 6.0 6.0 5.5	9.5 9.5 9.0 9.0 7.0 8.0 9.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5	9.0 9.0 9.5 9.0 9.0 9.0	MIN 6.5 6.5 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0	7.0 7.0 8.0 8.0 8.5 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5	7.0 7.0 7.0 7.0 7.0 6.5 6.0 6.5
1 2 3 4 5 6 7 8	MAX 6.0 8.0 7.0 8.0 8.5 9.0 8.5 6.5	M 4.5555 0500	9.5 10.0 10.5 10.0 10.0 8.5 8.5 9.5	MIN 5.0 5.5 6.0 6.0 5.5 5.5	MAX 9.5 9.5 9.0 7.0 8.0 9.0 8.5 8.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5	9.0 9.0 9.5 9.0 9.0 9.0 9.0	MIN 6.5 6.5 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0	7.0 7.0 8.0 8.0 8.5 8.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5	7.0 7.0 7.0 7.0 6.5 6.0 6.5 7.0
1 2 3 4 5	MAX 6.0 8.0 7.0 8.0 8.5 9.0 8.5	MIN 4.5 4.5 4.5 4.5 4.5 5.0 5.0	9.5 10.0 10.5 10.0 10.0	MIN 5.0 5.5 6.0 6.0 5.5	9.5 9.5 9.0 9.0 7.0 8.0 9.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5	9.0 9.0 9.5 9.0 9.0 9.0	MIN 6.5 6.5 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0	7.0 7.0 8.0 8.0 8.5 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5	7.0 7.0 7.0 7.0 7.0 6.5 6.0 6.5
1 2 3 4 5 6 7 8 9 10	MAX 6.0 8.0 7.0 8.5 9.0 8.5 6.5 9.0 8.5	MIN 55555 4.5555	9.5 10.0 10.5 10.0 10.0 8.5 8.5 9.5 9.5	MIN  5.0  5.0  5.5  6.0  6.0  5.5  6.0  6.0	9.5 9.5 9.0 9.0 7.0 8.0 9.0 8.5 8.5	MIN 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0	MIN 6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0	7.0 7.0 8.0 8.0 8.5 8.0 8.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5	7.0 7.0 7.0 7.0 7.0 6.5 6.0 6.5 7.0 7.0
1 2 3 4 5 6 7 8 9 10	MAX 6.0 8.0 7.0 8.0 8.5 9.0 8.5 6.5 9.0 8.5	MIN 555555 05000 555	9.5 10.0 10.5 10.0 10.0 8.5 9.5 9.5 9.5 9.5	MIN  5.0  5.0  5.5  6.0  6.0  6.0  5.5  6.0  6.0	9.5 9.5 9.0 9.0 7.0 8.0 9.0 8.5 8.0 8.5	MIN 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.6	9.0 9.5 9.0 9.0 9.0 9.0 9.0 8.5 8.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0	7.0 7.0 8.0 8.0 8.5 8.0 8.0 8.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5	7.0 7.0 7.0 7.0 6.5 6.0 6.5 7.0 7.0
1 2 3 4 5 6 7 8 9 10	MAX 6.0 8.0 7.0 8.5 9.0 8.5 6.5 9.0 8.5	MIN 555555 4.555 4.555	9.5 10.0 10.5 10.0 10.0 8.5 9.5 9.5 9.5 9.5	MIN 5.0 5.5 6.0 6.0 5.5 5.5 6.0 6.0	9.5 9.5 9.0 9.0 7.0 8.0 9.0 8.5 8.0 8.5	MIN 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 8.5 8.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 8.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0	#IN 7.0 7.0 8.0 8.0 8.5 8.0 6.0 8.0 7.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5	7.0 7.0 7.0 7.0 7.0 6.5 6.0 7.0 7.0 7.0
1 2 3 4 5 6 7 8 9 10	MAX 6.0 8.0 7.0 8.5 9.0 8.5 9.0 8.5 7.0 8.5	MIN 4.555555555555555555555555555555555555	9.5 10.0 10.5 10.0 10.0 8.5 9.5 9.5 9.5 9.5	MIN  5.0  5.0  5.5  6.0  6.0  5.5  6.0  5.5  5.5	9.5 9.5 9.0 7.0 8.0 9.0 8.5 8.0 8.5 8.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.5 9.5 9.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.0 7.0 8.0 8.0 8.5 8.0 8.0 8.0 8.0 8.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5	7.0 7.0 7.0 7.0 7.0 6.5 7.0 7.0 7.0
1 2 3 4 5 6 7 8 9 10	MAX 6.0 8.0 7.0 8.5 9.0 8.5 6.5 9.0 8.5	MIN 555555 4.555 4.555	9.5 10.0 10.5 10.0 10.0 8.5 9.5 9.5 9.5 9.5	MIN 5.0 5.5 6.0 6.0 5.5 5.5 6.0 6.0	9.5 9.5 9.0 9.0 7.0 8.0 9.0 8.5 8.0 8.5	MIN 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 8.5 8.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 8.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0	#IN 7.0 7.0 8.0 8.0 8.5 8.0 6.0 8.0 7.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5	7.0 7.0 7.0 7.0 7.0 6.5 6.0 7.0 7.0 7.0
1 2 3 4 5 6 7 8 9 10	6.0 8.0 7.0 8.0 8.5 9.0 8.5 6.5 9.0 8.5 7.0 8.0 8.0	MIN 4.5 4.5 4.5 4.5 5.0 5.0 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5	9.5 10.0 10.5 10.0 10.0 8.5 8.5 9.5 9.5 9.5 9.5 10.0	5.0 5.0 5.5 6.0 6.0 6.0 6.0 5.5 5.5 5.5 5.5 5.5	9.5 9.5 9.0 7.0 8.0 8.5 8.0 8.5 6.5 7.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.6 5 6.0	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.5 8.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.0 7.0 8.0 8.0 8.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5	MIN 7.0 7.0 7.0 7.0 7.0 6.5 6.0 6.5 7.0 7.0 7.0 7.0 6.5 6.0 6.0
1 2 3 4 5 6 7 8 9 10	6.0 8.0 7.0 8.0 8.5 6.5 6.5 7.0 8.5 7.0 8.5	MIN 4.5 4.5 4.5 5.0 5.0 4.5 5.0 4.5 4.5 4.5 4.5 4.5	9.5 10.0 10.5 10.0 10.0 8.5 9.5 9.5 9.5 9.5 9.5 10.0	5.0 5.5 6.0 6.0 6.0 6.0 5.5 5.5 5.5 5.5 5.5 5.5	9,5 9,5 9,0 9,0 7,0 8,0 9,0 8,5 6,5 7,0 7,0 9,0	MIN 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.0 5.5 6.0	9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.5 8.5 8.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.0 7.0 8.0 8.0 8.5 8.0 8.0 8.0 8.0 8.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 8.5 8.5	MIN 7.0 7.0 7.0 7.0 6.5 6.0 6.5 7.0 7.0 7.0 6.5 6.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	6.0 8.0 7.0 8.5 9.0 8.5 6.5 6.5 9.0 8.5 7.0 8.0 8.0 8.0 6.5 6.5 6.5 6.5	MIN 4.5 4.5 4.5 5.0 5.0 4.5 4.5 4.5 4.5 5.0	9.5 10.0 10.5 10.0 10.0 8.5 9.5 9.5 9.5 9.5 10.0	5.0 5.5 6.0 6.0 5.5 6.0 6.0 5.5 5.5 5.5 5.5 5.5 5.5 5.5	9.5 9.5 9.5 9.0 9.0 7.0 8.0 9.0 8.5 8.6 8.5 6.5 7.0 9.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.0 6.0	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	MIN 7.0 8.0 8.0 8.5 8.0 8.0 7.0 8.0 8.0 8.0 8.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 8.5 8.5	MIN 7.0 7.0 7.0 7.0 6.5 6.0 6.5 7.0 7.0 7.0 6.5 6.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	6.0 8.0 7.0 8.5 9.0 8.5 6.5 6.5 6.5 8.0 8.0	MIN  4.5  4.5  4.5  5.0  4.5  4.5  4.5  4.5	9.5 10.0 10.5 10.0 10.0 8.5 9.5 9.5 9.5 9.5 10.0 9.5 10.0	5.0 5.0 5.5 6.0 6.0 6.0 5.5 6.0 5.5 6.0 5.5 5.5 6.0	9,5 9,5 9,0 9,0 9,0 9,0 8,5 8,0 8,5 8,0 8,5 6,5 7,0 7,0 9,0	MIN 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.5 9.0 9.0 9.0 9.0 8.5 9.0 9.5 9.5 9.5 9.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	7.0 7.0 8.0 8.0 8.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.5 9.5 9.5 9.5 7.0 9.5 9.5 9.5 9.5 9.5 9.5 8.5 8.5	7.0 7.0 7.0 7.0 6.5 6.5 6.0 7.0 7.0 7.0 6.5 6.0 6.0 6.0 6.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	6.0 8.0 7.0 8.5 9.0 8.5 6.5 6.5 9.0 8.5 7.0 8.0 8.0 8.0 6.5 6.5 6.5	MIN  4.5  4.5  4.5  5.0  5.0  4.5  4.5  4.5	9.5 10.0 10.5 10.0 10.0 8.5 9.5 9.5 9.5 9.5 10.0	5.0 5.5 6.0 6.0 5.5 6.0 6.0 5.5 5.5 5.5 5.5 5.5 5.5 5.5	9.5 9.5 9.5 9.0 9.0 7.0 8.0 9.0 8.5 8.6 8.5 6.5 7.0 9.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.0 6.0	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	MIN 7.0 8.0 8.0 8.5 8.0 8.0 7.0 8.0 8.0 8.0 8.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 8.5 8.5	MIN 7.0 7.0 7.0 7.0 6.5 6.0 6.5 7.0 7.0 7.0 6.5 6.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	6.0 8.0 7.0 8.5 9.6 8.5 9.5 6.5 9.6 8.5 7.6 8.0 8.0 6.0 8.0 6.0	4.5 4.5 4.5 4.5 5.0 5.0 5.0 5.0 4.5 4.5 4.5 4.5 4.5 4.5 4.5 4.5 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	9.5 10.0 10.5 10.0 10.0 10.0 8.5 9.5 9.5 9.5 9.5 10.0 10.0	5.0 5.0 5.5 6.0 6.0 6.0 6.0 5.5 5.5 5.5 5.5 5.5 6.0 6.0	9.5 9.5 9.0 7.0 8.0 8.0 8.5 8.0 8.5 6.5 7.0 9.0 8.9	MIN 6.0 6.5 6.5 6.5 6.5 6.5 6.6 6.6 6.6 6.6 6.6	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	6.5 6.5 7.0 7.0 7.0 7.0 8.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0	9.5 10.0 9.5 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 9.5 9.5 9.5 9.0	MIN  7.0 7.0 8.0 8.0 8.0 8.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.5 9.5 9.5 9.5 7.0 7.0 7.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	MIN 7.0 7.0 7.0 7.0 6.5 6.0 7.0 7.0 7.0 7.0 6.5 6.0 6.5 6.5 6.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 19 10 11 11 11 11 11 11 11 11 11 11 11 11	6.0 8.0 7.0 8.5 9.0 8.5 9.0 8.5 9.0 8.5 9.0 8.0 9.0 6.5 9.0 8.0 8.0 8.0 8.0 8.5	MIN 4.5 4.5 4.5 5.0 5.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5	9.5 10.0 10.5 10.0 10.5 10.0 8.5 9.5 9.5 9.5 9.5 10.0 9.5 10.5 10.5 10.5 10.5 8.5 9.5	5.0 5.0 5.5 6.0 6.0 6.0 6.0 5.5 5.5 5.5 5.5 5.5 5.5 6.5 6.5 6.5 6.5	9,5 9,5 9,0 9,0 9,0 8,0 8,5 8,5 8,5 7,0 9,0 9,0 9,0 9,0 9,0	MIN 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.6 6.6 6.6	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.5 8.5 8.5 9.0 9.5 9.0 9.5 9.0	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	MIN 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	MIN 7.0 7.0 7.0 7.0 7.0 6.5 6.5 7.0 7.0 6.5 6.5 6.0 6.5 6.5 6.5 6.5
1 2 3 4 5 6 7 8 9 10 L1 12 13 L4 15 16 17 18 19 20 21 22	6.0 8.0 7.0 8.5 9.0 8.5 6.5 7.0 8.0 8.0 8.0 6.0 8.0 8.0	MIN  4.5  4.5  4.5  5.0  5.0  5.0  5.0  5.0	9.5 10.0 10.0 10.0 10.0 10.0 8.5 9.5 9.5 9.5 9.5 10.0 10.0 10.0	5.0 5.0 5.5 6.0 6.0 6.0 6.0 5.5 5.5 5.5 5.5 6.0 6.0 6.0	9.5 9.5 9.0 7.0 8.0 8.5 8.5 8.5 6.5 7.0 9.0 8.9	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.0 5.5 6.0 6.0 6.0 6.5 6.5 6.0	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.5 9.5 9.5 9.5 9.5 9.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.5 9.5 10.0 10.0 10.0 10.0 10.0 10.0 10.0 9.5 9.5 9.0	MIN 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	9.5 9.5 9.5 9.5 7.0 7.0 7.0 9.5 9.5 9.5 9.5 9.5 8.5 8.5 8.5 8.5	MIN  7.0 7.00 7.00 7.00 7.00 7.00 7.00 7.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	6.0 8.0 7.0 8.5 9.0 8.5 6.5 6.5 9.0 8.5 6.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	4.5 4.5 4.5 5.0 5.0 4.5 5.0 4.5 5.0 4.5 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5	9.5 10.0 10.5 10.0 10.5 10.0 8.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 8.5 9.5 9.5	5.0 5.0 5.5 6.0 6.0 6.0 6.0 5.5 5.5 5.5 5.5 5.5 5.5 6.5 6.5 6.5 6.5	9,5 9,5 9,0 9,0 9,0 8,0 8,5 8,5 8,5 7,0 9,0 9,0 9,0 9,0 9,0 9,0 9,0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.6 6.6 6.6	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.5 8.5 9.0 9.5 9.0 9.5 9.5 9.0	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	#IN   7.0   7.0   8.0   8.0   8.5   8.0	9.5 9.5 9.5 9.5 7.0 7.0 7.5 9.5 9.5 9.5 9.5 8.5 8.5 8.5 8.5 8.5	MIN 7.00 7.00 7.00 7.00 6.5 6.00 6.5 7.00 7.00 6.5 6.5 6.00 6.5 6.5 6.5 6.00 6.5 6.5
1 2 3 4 5 6 7 8 9 10 L1 12 13 L4 15 16 17 18 19 20 21 22	6.0 8.0 7.0 8.5 9.0 8.5 6.5 7.0 8.0 8.0 8.0 6.0 8.0 8.0	MIN  4.5  4.5  4.5  5.0  5.0  5.0  5.0  5.0	9.5 10.0 10.0 10.0 10.0 10.0 8.5 9.5 9.5 9.5 9.5 10.0 10.0 10.0	5.0 5.0 5.5 6.0 6.0 6.0 6.0 5.5 5.5 5.5 5.5 6.0 6.0 6.0 6.0	9.5 9.5 9.0 7.0 8.0 8.5 8.5 8.5 6.5 7.0 9.0 9.0 9.0 9.0	MIN  6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.5 6.6 6.6	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.5 9.5 10.0 10.0 10.0 10.0 10.0 10.0 10.0 9.5 9.5 9.0	MIN 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	9.5 9.5 9.5 9.5 7.0 7.0 7.0 9.5 9.5 9.5 9.5 9.5 8.5 8.5 8.5 8.5	MIN  7.0  7.0  7.0  7.0  6.5  6.0  7.0  7.0  6.5  6.0  6.5  6.5  6.5  6.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	6.0 8.0 7.0 8.5 9.6 8.5 6.5 9.6 8.5 7.6 8.0 8.0 6.5 9.0 8.0 6.5 8.0 6.0 8.0 6.0	4.5 4.5 4.5 4.5 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5	9.5 10.0 10.5 10.0 10.0 10.0 8.5 9.5 9.5 9.5 9.5 10.0 10.5 10.5 10.5 10.0 10.0 10.0	5.0 5.0 5.5 6.0 6.0 6.0 6.0 5.5 5.5 5.5 5.5 6.0 6.0 6.0 6.0	9.5 9.5 9.0 7.0 8.0 8.5 8.5 8.5 6.5 7.0 9.0 9.0 9.0 9.0	MIN  6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.5 6.6 6.6	9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.5 10.0 9.5 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 9.5 9.5 9.0 10.0	MIN  7.0  8.0  8.0  8.0  8.0  8.0  8.0  8.0	9.5 9.5 9.5 9.5 7.0 7.0 7.0 9.5 9.5 9.5 9.5 8.5 8.5 8.5 8.5 8.5 8.5	7.0 7.0 7.0 7.0 7.0 7.0 6.5 6.5 7.0 7.0 7.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 25 26 26 27 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	6.0 8.0 7.0 8.5 9.0 8.5 6.5 9.5 6.5 8.0 8.5 6.5 8.0 8.0 8.0 8.5 6.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 4.55 4.55 4.55 5.00 4.55 5.00 4.55 5.00 4.55 5.00 5.55 5.55	9.5 10.0 10.5 10.0 10.5 10.0 8.5 9.5 9.5 9.5 9.5 10.0 9.5 10.5 10.5 10.5 10.5 8.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9	MIN 5.0 5.0 6.0 6.0 6.0 6.0 5.5 5.5 6.0 6.0 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5	9.5 9.5 9.0 9.0 9.0 9.0 8.5 8.5 8.5 6.5 7.0 9.0 9.0 9.0 9.0 9.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.0 6.5 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.5 8.5 9.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	#IN   7.0   7.0   8.0   8.0   8.5   8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5	MIN 7.0 7.0 7.0 6.5 6.0 7.0 7.0 7.0 6.5 6.0 7.0 6.5 6.0 6.5 6.0 6.5 6.0 6.5 6.0 6.5 6.0 6.5 6.0 6.5 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0
1 2 3 4 5 6 7 8 9 10 LL 2 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27	6.0 8.0 7.0 8.5 9.0 8.5 9.0 8.5 9.0 8.0 9.0 8.0 6.5 6.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 4.555555555555555555555555555555555555	9.5 10.0 10.5 10.0 10.0 10.0 10.0 8.5 9.5 9.5 9.5 9.5 10.0 9.5 10.0 9.5 10.0 9.5 10.0 9.5 10.0 9.5 10.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	5.0 5.0 5.5 6.0 6.0 6.0 5.5 5.5 5.5 5.5 5.5 6.5 6.5 6.5 6.5 6.5	9.5 9.5 9.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.5 6.6 6.6	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.9 9.0 10.0 10.0 10.0 10.0 10.0 1	#IN   7.0   7.0   8.0	9.5 9.5 9.5 9.5 7.0 9.5 9.5 9.5 9.5 9.5 8.5 8.5 9.0 8.5 8.5 8.5 8.5 8.5 8.5 8.5	MIN  7.0  7.0  7.0  7.0  7.0  7.0  7.0  7.
1 2 3 4 5 6 7 8 9 1 0 1 1 2 2 1 2 3 1 4 4 5 1 7 1 1 8 9 2 2 2 2 2 3 2 2 5 2 6 6 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	6.0 8.0 7.0 8.5 9.5 6.5 9.5 8.5 7.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 4.55 4.55 5.00 4.55 5.00 4.55 5.05 5.55 5.55 5.55 5.55 5.55 5.55	9.5 10.0 10.5 10.0 10.5 10.0 8.5 9.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 8.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9	5.0 5.0 5.5 6.0 6.0 6.0 6.0 5.5 5.5 5.5 5.5 6.5 6.5 6.5 6.5 6.5 6.5	9.5 9.5 9.0 9.0 9.0 9.0 8.5 8.5 8.5 6.5 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.7 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.5 8.5 9.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	#IN   7.0   7.0   8.0   8.0   8.5   8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 8.5 8.5 8.5 8.5 8.5 8.5	MIN 7.00 7.00 7.00 6.5 6.05 7.00 7.00 6.5 6.05 6.05 6.05 6.05 6.05 6.05 6.
1 2 3 4 4 5 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 29	6.0 8.0 7.0 8.5 9.0 8.5 9.0 8.5 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 4.555555555555555555555555555555555555	9.5 10.0 10.5 10.0 10.0 10.0 10.0 10.0 9.5 9.5 9.5 9.5 9.5 10.0 9.5 10.0 9.5 10.0 9.5 10.0 9.5 10.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	MIN 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.0 6.0	9,5 9,5 9,0 9,0 9,0 9,0 9,0 8,0 8,0 8,0 8,0 8,0 9,0 9,0 9,0 9,0 9,0 9,0 9,0 9,0 9,0 9	MIN  6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.0 5.5 6.0 6.0 6.0 6.5 6.5 6.7 6.0 6.5 6.5 7.0 6.5 7.0 6.5 6.5	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.9 9.0 10.0 10.0 10.0 10.0 10.0 1	#IN   7.0   7.0   8.0	9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 9.5 8.5 8.5 8.5 8.5 8.6 8.6 8.7 8.5 8.5 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6	MIN 7.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1 2 3 4 5 6 7 8 9 1 0 1 1 2 2 1 2 3 1 4 4 5 1 7 1 1 8 9 2 2 2 2 2 3 2 2 5 2 6 6 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	6.0 8.0 7.0 8.5 9.5 6.5 9.5 8.5 7.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	MIN 4.55 4.55 5.00 4.55 5.00 4.55 5.05 5.55 5.55 5.55 5.55 5.55 5.55	9.5 10.0 10.5 10.0 10.5 10.0 8.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 8.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9	5.0 5.0 5.5 6.0 6.0 6.0 6.0 6.5 5.5 5.5 5.5 5.5 6.5 6.5 6.5 6.5 6.5	9.5 9.5 9.0 9.0 9.0 9.0 8.5 8.5 8.5 6.5 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.6 6.7 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	#IN   7.0   7.0   8.0   8.0   8.5   8.0	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 8.5 8.5 8.5 8.5 8.5 8.5	MIN 7.00 7.00 7.00 6.5 6.05 7.00 7.00 6.5 6.05 6.05 6.05 6.05 6.05 6.05 6.
1 2 3 4 5 5 6 7 8 9 10 L1 2 13 14 15 16 17 18 19 20 21 22 23 24 5 27 28 29 30 31	6.0 8.0 7.0 8.5 9.5 6.5 6.5 8.5 7.0 8.0 8.5 6.5 8.0 8.0 8.0 8.5 6.5 8.0 8.0 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 6.5 8.0 8.5 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	4.5 4.5 4.5 5.0 5.0 4.5 5.0 4.5 5.0 4.5 5.0 4.5 5.0 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5	9.5 10.0 10.5 10.0 10.5 10.0 8.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 8.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9	5.0 5.0 5.5 6.0 6.0 6.0 6.0 6.0 5.5 5.5 5.5 5.5 5.5 6.5 6.5 6.5 6.5 6.5	9.5 9.5 9.0 9.0 9.0 9.0 8.0 8.5 6.5 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MIN 6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.0 6.5 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 9.5 9.5 9.0 10.0 9.5 9.0 10.0 9.0 10.0 9.0 10.0	#IN N 7.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	9.5 9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8	MIN 7.00 7.00 7.00 6.5 6.05 7.00 7.00 6.5 6.0
1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 15 16 17 18 19 20 21 22 23 24 5 27 28 29 30	6.0 8.0 7.0 8.5 9.0 8.5 9.0 8.5 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 4.555555555555555555555555555555555555	9.5 10.0 10.5 10.0 10.5 10.0 8.5 9.5 9.5 9.5 10.5 10.5 10.5 10.5 8.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9	5.0 5.0 5.5 6.0 6.0 6.0 6.0 6.5 5.5 5.5 5.5 5.5 6.5 6.5 6.5 6.5 6.5	9,5 9,5 9,0 9,0 9,0 9,0 9,0 8,0 8,0 8,0 8,0 8,0 9,0 9,0 9,0 9,0 9,0 9,0 9,0 9,0 9,0 9	MIN  6.0 6.0 6.5 6.5 6.5 6.5 6.5 6.5 6.0 5.5 6.0 6.0 6.0 6.5 6.5 6.7 6.0 6.5 6.5 7.0 6.5 7.0 6.5 6.5	9.0 9.0 9.5 9.0 9.0 9.0 9.0 9.0 9.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	6.5 6.5 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	9.5 10.0 9.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	#IN   7.0   7.0   8.0   8.0   8.5   8.0	9.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 9.5 8.5 8.5 8.5 8.5 8.6 8.6 8.7 8.5 8.5 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6 8.6	MIN 7.00 7.00 7.00 6.5 6.05 7.00 7.00 6.5 6.05 6.05 6.05 6.05 6.05 6.05 6.

#### BIG SMOKY AND IONE VALLEYS

# 10249300 SOUTH TWIN RIVER NEAR ROUND MOUNTAIN, NEV. (Hydrologic bench-mark station)

LOCATION, --Lat 38°53'00", long 117°14'35", in SE<sup>1</sup>/<sub>4</sub> sec.22, T.12 N., R.42 E., Nye County, at gaging station on right bank, 600 ft upstream from diversion, 3 miles west of State Highway 8A, and 15 miles northwest of Round Mountain.

DRAINAGE AREA. -- 20 sq mi.

PERIOD OF RECORD, --Chemical analyses: October 1967 to September 1970. Water temperatures: April 1966 to September 1968, November 1969 to September 1970. Sediment records: October 1967 to September 1970 (partial records).

EXTREMES. -- 1969-70:
Water temperatures: Maximum, 16.0°C Aug. 11; minimum, 0.5°C on many days during winter periods.

Period of record:
Water temperatures: Maximum, 17.0°C July 25, 29, 1966; minimum, freezing point on several days in February 1966.

REMARKS. -- Temperature recorder stopped Nov. 29 to Dec. 30; range in temperature, 0.5°C to 4.5°C.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

BTAC	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	S1L [CA (S102) (MG/L)	CAL- GIUM (GA) (MG/L)	MAG- NE- Sium (MG) (MG/L)	SODIUM (NA) (MG/L)	PO~ TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
0CT. 24	1000	2.8	5.5	18	19	1.6	6.2	.9	72	0	7.0	2.0
NOV. 25	1220	2.4	3.0	19	18	1.6	6.0	. 7	70	0	7.0	1.0
DEC. 31	1050	2.1	0.5	17	19	1.7	6.2	.8	72	0	7.0	1.6
JAN. 29	1202	2.^	0.5	17	18	1.6	6.4	.7	66	0	7.0	2.0
MAR. 12 APR.	1100	2.5	3.5	17	17	1.5	6.1	.7	62	0	9.0	1.6
17	1100	3.2	4.5	17	18	1.4	5.8	.7	65	0	7.0	1.4
29 JUNE	1130	16	7.0	20	11	.9	5.1	.8	37	0	7.0	1.6
25 JULY	0900	8 • 2	9.5	19	17	.9	5.7	1.1	64	0	3.0	• B
31 AUG.	1019	2.6	11.0	21	14	1.1	5.8	• 7	58	0	4.0	.6
27 SEPT.	C715	3.6	12.0	19	16	1.3	6.1	.9	62	0	6.0	1.1
24	0855	1.8	8.0	20	17	1.5	6.2	.8	68	0	5.0	1.2
DATE	FLUO- RIDE (FI (MG/L)	NITRATE (403) (MG/L)	BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTSI (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AO+ SORP- TION RATIO	PERCENT SOOTUM	ALKA- LINITY AS CACO3 (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	FIELD PH (UNITS)
DCT.	RIDE (F) (MG/L)	(4031 (467L)	(B) (UG/L)	SOLVED SOLIDS (SUM DF CONSTI- TUENTSI (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	SODIUM	LINITY AS CACO3 (MG/L)	FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
DCT. 24	RIDE (F) (MG/L)	(4031 (MG/L)	(B) (UG/L) 10	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	AU- SORP- TION RATIO	20 20	LINITY AS CACO3 (MG/L)	FIC COND- UCTANCE (MICRO- MHOS)	PH
DCT. 24 NOV. 25 DEC.	**RIDE (F) (MG/L) **2	(MG/L)	(B) (UG/L) 10 20	SOLVED SOLIDS (SUM DF CONSTI- TUENTSI (MG/L)	SOLVED SOLIOS (TONS PER AC-FT) .12	NESS (CA, MG) (MG/L) 54	CAR- BONATE HARD- NESS (MG/L)	AU- SORP- TION RATIO	20 20	LINITY AS CACO3 (MG/L) 59	FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS) B.1
DCT. 24 NDV. 25 DEC. 31	**************************************	(MG/L)  .0 .0	(B) (UG/L) 10 20 40	SOLVED SOLIDS (SUM OF CONSTI- TUENTSI (MG/L) 90 B7	SOLVED SOLIDS (TONS PER AC-FT) .12 .13	NESS (CA, MG) (MG/L) 54 52	CAR- BONATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	20 20 20 20	LINITY AS CACO3 (MG/L) 59 57	FIC COND- UCTANCE (MICRO- MHOS) 135 133	PH (UNITS)  8.1  7.8
DCT. 24 NOV. 25 DEC. 31 JAN. 29 MAR.	RIDE (F) (MG/L) +2 +2 +3	(NO3) (MG/L)	(B) (UG/L) 10 20 40	SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 90 B7 89	SOLVED SOLIDS (TONS PER AC-FT) .12 .13 .12	NESS (CA, MG) (MG/L) 54 52 54 52	CAR- BONATE HARD- NESS (MG/L)	AO- SORP- TION RATIO	20 20 20 20 20	LINITY AS CACO3 (MG/L) 59 57 59	FIC COND- UCTANCE (MICRO- MHOS) 135 133 137	PH (UNITS)  8.1   7.8  7.7
DCT. 24 NDV. 25 DEC. 31 JAN. 29 MAR. 12 APR.	RIDE (F) (MG/L) +2 +2 +3 +1	(NO3) (NG/L) .0 .0 .2 .3	(B) (UG/L) 10 20 40 0	SOL VED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 90 87 89 86 84	SOLVED SOLIOS (TONS PER AC-FT) .12 .13 .12 .12	NESS (CA, MG) (MG/L) 54 52 54 52 48	CAR- BONATE HARD- NESS (MG/L) 0 0 0	AO- SDRP- TION RATIO	20 20 20 20 21 21	LINITY AS CACO3 (MG/L) 59 57 59 54	FIC COND- UCTANCE (41 CRO- MHOS) 135 133 137 133	PH (UNITS)  8.1   7.8  7.7
DCT. 24 NOV. 25 DEC. 31 JAN. 29 4PR. 17 MAY	RIDE (F) (MG/L)  -2  -2  -3  -1  -1	(NO3) (MG/L) .0 .0 .2 .3	(B) (UG/L) 10 20 40 0 10	SOL VED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L) 90 B7 89 86 84	SOLVEO SOLIOS (TONS PER AC-FT) .12 .13 .12 .11	NESS (CA, MG) (MG/L) 54 52 54 52 48 51	CAR- BONATE HARD- NESS (MG/L) O O O O	AU- SORP- TION RATIO	20 20 20 21 21 21	LINITY AS CACO3 (MG/L) 59 57 59 54 51	135 133 137 127	PH (UNITS)  8.1   7.8  7.7  7.7
DCT. 24 NOV. 25 25 Jan. 29 MAR. 12 APR. 17 MAY 28 JUNE	**RIDE (F) (MG/L)  **2  **2  **3  **1  **1  **1	(403) (MG/L) .0 .2 .3 .0 .1	(8) (UG/L) 10 20 40 0 10 80	SOL VED SOL TOS (SUM OF CONSTI- TUENTS) (MG/L) 90 87 89 86 84 84	SDL VED SDL INS (TONS PER AC-FT)  .12 .13 .12 .11 .11	NESS (CA, MG) (MG/L) 54 52 54 52 48 51 31	CAR- BONATE HARD- NESS (MG/L) 0 0 0 0 0	AO- SORP- TION RATIO  -4  -4  -4  -4  -4  -4  -3	20 20 20 21 21 21 20	LINITY ASCACO3 (MG/L) 59 57 59 54 51 53	FIC CONTROL OF THE PROPERTY OF	PH (UNITS)  8.1   7.8  7.7  7.6  7.6
DCT. 24 NOV. 25 DEC. 31 JAN. 29 PAR. 12 APR. 17 MAY 28 JUNE 25 JULY	RIDE (F) (MG/L) -2 -2 -3 -1 -1 -1 -1	(403) (46/L) .0 .2 .3 .0 .1	(8) (UG/L) 10 20 40 0 10 80 70	SOL VED SOL LOS (SUM OF CONSTIL-TUENTS) (MO/L)  90  87  89  86  84  65  80	SDL VED SOLIOS (TONS PER AC-FT) .12 .13 .12 .11 .11 .09	NESS (CA. MG) (MG/L) 54 52 54 52 48 51 31	CAR- BONATE HARD- NESS (MG/L)	AU- SORP- TION RATIO  .4  .4  .4  .4  .4  .4  .4	20 20 20 21 21 20 14 21	LINITY AS CACO3 (MG/L) 59 57 59 54 51 53 30	ETC COND- UCTANCE (MICRO- MICR	PH (UNITS)  8.1   7.8  7.7  7.6  7.6  7.5
DCT. 24 NOV. 25 DEC. 31 JAN. 29 PAR. 12 APR. 17 MAY 28 JUNE 25 JULY 31 AUG.	RIDE (F) (MG/L) -2 -2 -3 -1 -1 -1 -2	(403) (467L) .0 .0 .2 .3 .0 .1 .7	(B) (UG/L) 10 20 40 0 10 80 70 0	SOL VED SOL IDS (SUM OF CONSTITUTE OF CONSTI	SDLVED SOLIOS (TONS PER AC-FT) .12 .13 .12 .11 .11 .09 .11 .10	NESS (CA, MG) (MG/L) 54 52 54 52 48 51 31 46	CAR- BONATE HARD- NESS (MG/L)  O  O  D  D  L  O  O	AU- SORP- TION RATIO  .4  .4  .4  .4  .4  .4  .4  .4  .4  .	20 20 20 21 21 20 14 21 24	LINITY AS GACO3 (MG/L) 59 57 59 54 51 53 30 52	PIC COND- UCTANCE (MICRO- MHOS)  135  133  137  133  127  124  84  120  104	PH (UNITS)  8.1   7.8  7.7  7.6  7.6  7.5  7.8
DCT. 24 NOV. 25 DEC. 31 JAN. 29 #AR. 12 APR. 17 MAY 28 JUNE 25 JULY 31	RIDE (F) (MG/L) -2 -2 -3 -1 -1 -1 -1	(403) (46/L) .0 .2 .3 .0 .1	(8) (UG/L) 10 20 40 0 10 80 70	SOL VED SOL LOS (SUM OF CONSTIL-TUENTS) (MO/L)  90  87  89  86  84  65  80	SDL VED SOLIOS (TONS PER AC-FT) .12 .13 .12 .11 .11 .09	NESS (CA. MG) (MG/L) 54 52 54 52 48 51 31	CAR- BONATE HARD- NESS (MG/L)	AU- SORP- TION RATIO  .4  .4  .4  .4  .4  .4  .4	20 20 20 21 21 20 14 21	LINITY AS CACO3 (MG/L) 59 57 59 54 51 53 30	ETC COND- UCTANCE (MICRO- MICR	PH (UNITS)  8.1   7.8  7.7  7.6  7.6  7.5

#### SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS. WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	WATER TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 24. 1969	1200	5.5	2.8	1	.01
NUV 25	1120	3.0	2.4	1	.01
DEL 31	1055	•5	2.1	3	.02
JAN 29. 1970	1100	.5	2.0	1	.01
MAR 12	1040	3.5	2.5	2	-01
APR 17	1100	4.5	3.2	7	.06
MAY 28	1130	7.0	16	27	1.2
JUN 25	0930	9.5	8 - 2	5	.11
JUL 31	1010	11.0	2.6	4	.03
AUG 27	1245	12.0	3.6	8	.D8
SEP 24	0915	8.0	1.8	4	.02

## BIG SMOKY AND IONE VALLEYS

## 10249300 SOUTH TWIN RIVER NEAR ROUND MOUNTAIN, NEV. -- Continued CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TOTAL PHOS- PHORUS AS PO4 (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	AMMONIA (NH4) (MG/L)	DRGANIC NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	DISS- OLVED OXYGEN (MG/L)	BIO- CHEM- ICAL DXYGEN DEMAND (MG/L)	AR SENIC (AS) (UG/L)	BARIUM (BA) (UG/L)	SILVER (AG) (UG/L)
DCT.										
24	.02	•02	.00	.13	.13	9.8	. 4	0	n	20
NOV. 25	.03	-00	•09	.14	•21	11.0	.6			
DEC.	.03	•00	•04	•14	• 21	11.0	• 0			
31	.04	.04	.22	.07	.24	11.4	.0			
JAN.										
29 MAR.	• 29	• ^ 5	.06	•^9	•14	12.0				
12	.15	•09	.00	.65	.65	10.0	• 0			
APR.	•••	••,	•00	•07	•••		• •			
17	.34	.34	•04	.16	-19	10.2	. 9			
MAY							_	_		
28 JUNE	• 0.9	.03	-15	.12	.24	9.4	• 2	0	500	50
25	. 25	.15	•04	.44	.47	11.4	• 0			
JULY				•						
31	.05	.04	•05	•92	- 06	9.5	.0			
AUG. 27	. 28	.04	••			10.4	.9			
SEPT.	• '''	• 04	.00	•14	-14	10.4	• •			~
24	.04	.01	.06	.12	.17	9.8	• 2			

## SPECTROGRAPHIC ANALYSES

DATE	AL Min (Al	UM I	RON FE)	MAN- GANESE (MN)	D	DLYB- ENUM MO)	NICKEL (NI)	VANA- DIUM (V)	- ZIN (ZN	IC MI	IS- CAD- UTH MIUM BI) (CD)
0C T • 24 • • • MAY	<2	•5	6.5	<2.5		1.0	<.5	<.5	<10		<.5 <2.5
28	200	9	7	<1.4		<.3	<.3	• 9	<5.	7	<.3 <1.4
	DATE	CO- BALT (CO)	COI PEI (CI	₹	CHRO- Mium (CR)	GAL LIU (GA	M	GERMA~ NIUM (GE)	LEAD (PB)	TITA- NIUM (TI)	BERYL- Llum (BE)
	OCT. 24 MAY	<2.5	<2	. 5	<2.5	<10		<.5	<2.5	<1.0	<1.0
	28	<1.4	<1	. 4	<1.4	<5.	7	<.3	<1.4	3.7	<.6

## PESTICIDE ANALYSIS

DATE OF COLLECTION	ALDRIN	DDD	DDE	DDT	DIEL- DRIN	ENDRIN	HEPTA- CHLOR	LINDANE	2,4-D	SILVEX	2,4,5-T
OCT. 24A OCT.	•00	.00	•00	•00	• 00	•00	•00	•00	.00	•00	•00
24B	.00	•00	.00	.00	•00	• 00	.00	•00			

A WATER SAMPLE.
B BOTTOM SEDIMENT.

## RADIOCHEMICAL ANALYSES

		DISS	DLVED		IN SUSPEND	ED SEDIMENTS
DATE OF COLLECTION	URANIUM (UG/L)	RADIUM (PC/L)	GROSS ALPHA (UG/L)	GROSS BETA (PC/L)	GROSS Alpha (PC/L)	GROSS BETA (PC/L)
OCT. 24 May	2.2	.07	5.4	2.0	<.4	.5
28	• 26	•03	1.5	4.5	4.9	2.2

## BIG SMOKY AND IONE VALLEYS

## 10249300 SOUTH TWIN RIVER NEAR ROUND MOUNTAIN, NEV. -- Continued

## TEMPERATURE (°C) OF WATER, NOVEMBER 1969 TO SEPTEMBER 1970

DAY	oc	τ.	N	٥v	D	EC	J	AN	F	ЕВ	м	AR
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1							0.5	0.5	1.5	1.5	4.5	3.5
2							0.5 0.5	0.5 0.5	1.0 2.0	0.5	4.0 3.5	2.0
4							0.5	0.5	3.0	1.0	3.5	1.0
5							0.5	0.5	4.0	2.0	3.5	2.0
5							0.5	0.5	4.0	3.0	4.0	1.0
7 8							1.0	0.5	3.5	3.0	4.5	2.0
ä							1.5 2.0	1.0	4.0 4.0	3.0 3.0	5.0 4.0	3.0 l.5
10							2.0	2.0	4.0	4.0	3.0	2.0
11							3.0	2.0	5.5	4.0	3.5	1.5
12 13							3.0	3.0	4.5	3.5	5.0	2.0
14							3.0 3.0	2.0 2.0	3.5 3.5	3.0	5.5 5.5	3.5 4.0
15							3.0	3.0	3.5	1.5	4.5	2.0
16							4.0	3.0	4.0	3.0	5.0	1.5
17 19							3.5	3.5	3.5	1.5	4.0	1.5
19							4.C 3.5	3.0 3.0	1.5	1.0 0.5	3.0 3.5	0.5
20				~-			3.5	3.0	1.5	0.5	4.6	0.5
21				~-			5.0	3.5	3.0	1.5	5.5	1.5
22 23							5.0	4.5	4.9	3.0	5.5	1.5
24							4.5	4.0 3.0	3.5 4.0	2.0	6.0 7.0	3.0 3.0
25			3.5	3.0			3.0	2.0	4.0	2.0	5.5	2.0
26			3.5	3.0			3.5	2.0	4.0	2.0	3.5	2.0
27 28			3.5	3.0			3.5	1.5	4.5	3.0	4.5	1.5
29			5.0	1.5			1.5	0.5 0.5	4.0	3.5	5.5 5.0	1.5
30							0.5	0.5			4.0	1.5
31					0.5	0.5	1.5	0.5			3.0	1.5
AVG							2.4	1.8	3.3	2.2	4.4	1.8
DAY	API	R	МА	Y	JU	IN	J (	JL	At	JG	S	ΕP
DAY	AP!	R M I N	MAX	MIN	J. MAX	IN MIN	J. XAM	JŁ M I N	AS MAX	JG MIN	S:	EP MIN
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MÁX	MIN
DAY	MAX 4.5	MIN 0.5	MAX B.5	MIN 3.0	MAX 11.5	MIN 6.5	MAX 12.0	MIN 9.5	MAX 14.5	MIN 10.5	MAX 13.5	MIN 10.0
1 2 3	MAX 4.5 6.0 5.5	MIN 0.5 2.0 1.5	MAX 8.5 9.5 10.0	MIN 3.0 3.5 5.0	MAX 11.5 12.0 11.5	MIN 6.5 8.0 8.0	MAX 12.0 13.0 13.0	MIN 9.5 9.0 9.5	MAX 14.5 14.5 15.0	MIN 10.5 10.5 10.5	MAX 13.5 13.0 13.0	MIN 10.0 9.5 9.0
1 2 3	MAX 4.5 6.0 5.5 6.0	0.5 2.0 1.5	MAX 8.5 9.5 10.0 3.5	MIN 3.0 3.5 5.0 5.5	MAX 11.5 12.0 11.5 10.5	MIN 6.5 8.0 8.0 9.0	MAX 12.0 13.0 13.0	MIN 9.5 9.0 9.5 10.0	MAX 14.5 14.5 15.0 13.5	MIN 10.5 10.5 10.5 12.0	MAX 13.5 13.0 13.0	MIN 10.0 9.5 9.0 9.0
1 2 3 4 5	4.5 6.0 5.5 6.0 7.0	MIN 0.5 2.0 1.5 1.5 3.0	8.5 9.5 10.0 8.5 10.0	MIN 3.5 5.0 5.5	MAX 11.5 12.0 11.5 10.5	MIN 6.5 8.0 8.0 9.0 8.5	12.0 13.0 13.0 13.0	9.5 9.0 9.5 10.0	MAX 14.5 14.5 15.0 13.5 14.5	MIN 10.5 10.5 10.5 12.0 11.0	MAX 13.5 13.0 13.0 12.0 9.0	MIN 10.0 9.5 9.0 9.0 8.0
1 2 3 4 5	4.5 6.0 5.5 6.0 7.0	MIN 0.5 2.0 1.5 1.5 3.0	8.5 9.5 10.0 8.5 10.0	MIN 3.0 3.5 5.0 5.5 5.5	MAX 11.5 12.0 11.5 10.5 10.0	MIN 6.5 8.0 8.0 9.0 8.5	MAX 12.0 13.0 13.0 13.0 12.0	4.5 9.0 9.5 10.0 11.0	MAX 14.5 14.5 15.0 13.5 14.5	MIN 10.5 10.5 10.5 12.0 11.0	MAX 13.5 13.0 13.0 12.0 9.0	MIN 10.0 9.5 9.0 9.0 8.0
1 2 3 4 5	MAX 4.5 6.0 5.5 6.0 7.0	MIN 0.5 2.0 1.5 1.5 3.0	8.5 9.5 10.0 8.5 10.0	MIN 3.0 3.5 5.0 5.5 5.5 5.5	MAX 11.5 12.0 11.5 10.5 10.0	MIN 6.5 8.0 8.0 9.0 8.5	MAX 12.0 13.0 13.0 12.0	9.5 9.0 9.5 10.0 11.0	MAX 14.5 14.5 15.0 13.5 14.5	MIN 10.5 10.5 10.5 12.0 11.0	MAX 13.5 13.0 13.0 12.0 9.0	MIN 10.0 9.5 9.0 9.0 8.0
1 2 3 4 5 6 7 8 9	MAX 4.5 6.0 5.5 6.0 7.0 8.0 7.0	MIN 0.5 2.0 1.5 1.5 3.0 3.5 3.5 3.5	8.5 9.5 10.0 8.5 10.0 7.3 8.5 7.0	MIN 3.55 5.55 5.55 5.55 5.55 5.55 5.55 5.5	MAX 11.5 12.0 11.5 10.5 10.0	MIN 6.5 8.0 9.0 8.5 9.0 8.5	12.0 13.0 13.0 12.0 12.0 12.0 12.0	9.5 9.0 9.5 10.0 11.0	MAX 14.5 15.0 13.5 14.5 15.5 15.5	MIN 10.5 10.5 10.5 12.0 11.0	MAX 13.5 13.0 13.0 12.0 9.0 11.5 13.0	MIN 10.0 9.5 9.0 9.0 8.0 9.5 10.0
1 2 3 4 5 6 7 8 9	MAX 4.5 6.0 5.5 6.0 7.0 8.0 7.0 6.0 8.0	MIN 0.5 2.0 1.5 1.5 3.0 3.5 3.5 3.5 4.5	8.5 9.5 10.0 8.5 10.0 7.0 8.5 7.0 9.5 8.5	MIN 3.05 5.05 5.55 5.55 5.55 5.55 5.55 5.55	MAX 11.5 12.0 11.5 10.5 10.0 10.0 11.5 10.5 9.5	MIN 6.5 8.0 8.0 9.0 8.5 9.0 8.5 9.0 8.5	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 11.5	9.5 9.0 9.5 10.0 11.0 10.5 10.0 10.0	MAX 14.5 14.5 15.0 13.5 14.5 15.5 15.0 15.0	MIN 10.5 10.5 10.5 12.0 11.0 11.5 11.0	MAX 13.5 13.0 13.0 12.0 9.0 11.0 13.0 13.0	MIN 10.0 9.5 9.0 9.0 8.0 9.5 10.0
1 2 3 4 5 6 7 8 9	MAX 4.5 6.0 5.5 6.0 7.0 8.0 7.0 6.0 8.0	MIN 0.5 2.0 1.5 1.5 3.5 3.5 3.5 3.5 4.5	8.5 9.5 10.0 3.5 10.0 7.0 8.5 7.0 8.5 7.0	MIN 3.5055555555555555555555555555555555555	MAX 11.5 12.0 11.5 10.5 10.0 11.5 10.5 9.5 9.5	MIN 6.5 8.0 8.0 9.0 8.5 9.0 8.5 9.5 7.0	MAX 12.0 13.0 13.0 12.0 12.0 12.0 12.0 12.0	9.5 9.0 9.5 10.0 11.0 10.5 10.0 10.0 10.5	MAX 14.5 14.5 15.0 13.5 14.5 15.5 15.0 15.0	MIN 10.5 10.5 10.5 12.0 11.0 11.5 11.0 11.5	MAX 13.5 13.0 13.0 12.0 9.0 11.0 11.5 13.0 13.0	MIN 10.0 9.5 9.0 9.0 8.0 9.5 10.0
1 2 3 4 5 6 7 8 9 1C	MAX 4.5 6.0 5.5 6.0 7.0 8.0 7.0 8.0 7.0 6.5	MIN 0.5 2.0 1.5 1.5 3.5 3.5 3.5 3.5 4.0	8.5 9.5 10.0 4.5 10.0 7.0 8.5 7.0 9.5 8.5	MIN 355.055.55.55.55.4.00	MAX 11.5 12.0 11.5 10.5 10.0 10.5 9.5 9.5	MIN 6.0 8.0 9.05 9.05 9.05 9.05 9.05 9.05	MAX 12.0 13.0 13.0 12.0 12.0 12.0 11.5 11.0	4.5 9.0 9.5 10.0 11.0 10.5 10.0 11.0 10.5	MAX 14.5 14.5 15.5 15.5 15.5 15.5 15.0 15.0 15.0	MIN 10.5 10.5 10.5 12.0 11.0 11.5 11.0 10.5 11.0	MAX 13.5 13.0 13.0 12.0 9.0 11.5 13.0 13.0 13.0	MIN 10.0 9.5 9.0 9.0 8.0 9.5 10.0 9.5
1 2 3 4 5 6 7 8 9 10	MAX 4.5 6.0 5.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MIN 0.5 2.0 1.5 3.5 3.5 3.5 3.5 4.0 2.0 3.0	8.5 9.5 10.0 1.5 10.0 7.0 8.5 7.0 9.5 9.5 9.5	MIN 3.5055555555555555555555555555555555555	MAX 11.5 12.0 11.5 10.5 10.0 11.5 10.5 9.5 9.5	MIN 6.5 8.0 9.05 9.05 9.05 9.05 9.05 9.05 9.05 9.	MAX 12.0 13.0 13.0 12.0 12.0 12.0 11.5 11.0	4.5 9.0 9.5 10.0 11.0 10.5 10.0 10.5 9.5 10.0 10.5	MAX 14.5 14.5 13.5 14.5 15.5 15.0 15.0 15.0 15.5 14.5 14.5	MIN  10.5 10.5 10.5 12.0 11.0 11.5 11.5 11.5 11.0 12.0 13.0 13.0	13.5 13.0 13.0 12.0 9.0 11.0 13.0 13.0 13.0 13.0	MIN 10.0 9.5 9.0 9.0 8.0 8.0 9.5 10.0 9.5 10.0
1 2 3 4 5 6 7 8 9 1 C	MAX 4.5 6.0 5.5 6.0 7.0 8.0 7.0 6.0 8.0 7.0 6.0 8.0	MIN 0.5 2.0 1.5 1.5 3.5 3.5 3.5 3.5 4.5	8.5 9.5 10.0 8.5 10.0 7.0 8.5 7.0 9.5 8.5 9.5	MIN 3.50.55 5.055.5 5.055.5 4.005	MAX 11.5 12.0 11.5 10.5 10.0 10.0 11.5 9.5 9.0 9.2 8.5 8.0	MIN 6.5 8.0 8.0 8.5 9.5 9.5 9.5 7.0 6.5 6.5	MAX 12.0 13.0 13.0 12.0 12.0 12.0 11.5 11.0	4.5 9.0 9.5 10.0 11.0 10.5 10.0 11.0 10.5	14.5 14.5 15.0 13.5 14.5 15.5 15.5 15.5 15.5 16.0 14.5 14.5 14.5	MIN 10.5 10.5 10.5 11.0 11.0 11.5 11.0 11.5 11.0	MAX 13.5 13.0 13.0 12.0 9.0 11.0 13.0 13.0 13.0	MIN 10.0 9.5 9.0 9.0 8.0 9.5 10.0 9.5 10.0
1 2 3 4 5 6 7 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4.5 6.0 7.0 9.0 7.0 6.0 8.0 7.0 6.5 4.5 3.5 5.5	0.5 2.0 1.5 1.5 3.5 3.5 3.5 4.5 4.0 2.0 2.0 2.0	8.5 9.5 10.0 3.5 10.0 7.0 8.5 7.0 8.5 7.0 8.5 9.5 9.5 9.5	MIN 3.0 3.5 5.5 5.5 5.5 4.0 6.0	11.5 12.0 12.0 10.5 10.0 11.5 10.5 10.0 11.5 9.0 9.0 8.5 8.0 7.0 8.5	MIN 6.5 8.0 9.0 8.5 9.0 8.5 7.0 6.0 6.5 6.6 8.0	12.C 13.0 13.0 13.0 12.C 12.C 12.C 12.C 11.5 11.5 11.5 11.5 11.5 11.5	4.5 9.5 10.0 11.0 10.5 10.0 10.5 9.5 10.0 10.5 11.5	14.5 14.5 15.0 13.5 14.5 15.5 15.5 15.0 15.0 15.5 16.0 14.5 14.5 14.0	MIN 10.5 10.5 10.5 12.0 11.0 11.5 11.0 11.5 11.0 11.5 12.0 12.0 13.0 12.0	13.5 13.0 12.0 9.0 11.5 13.0 13.0 13.0 13.0 10.0 9.0 9.0	#IN 10.0 9.5 9.0 8.C 8.0 9.5 10.C 9.5 10.0
1 2 3 4 5 6 7 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4.5 6.0 5.5 6.0 7.0 7.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	0.5 2.0 1.5 1.5 3.5 3.5 3.5 3.5 4.5 4.6 2.0 2.0 1.5	8.5 16.9 8.5 10.9 7.0 8.5 7.0 9.5 8.5 9.0 8.5 9.0	MIN 3.0 3.5 5.5 5.5 5.5 4.0 6.0 6.5	11.5 12.0 11.5 10.5 10.5 10.6 11.5 10.5 9.5 9.5 9.0 8.5 8.5 8.5	MIN 6.5 8.0 9.0 8.5 9.0 8.5 7.0 6.5 6.6 6.7 6.7 7.0	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 11.5 11.5 11.5 11.5 11.5 14.5 15.5	4.5 9.0 9.5 10.0 11.0 10.5 10.0 11.0 10.5 10.0 11.5 11.5	14.5 14.5 15.0 13.5 14.5 15.5 15.5 15.0 15.0 15.0 15.0 15.5 16.0 14.5 14.5 14.5	MIN 10.5 10.5 10.5 12.0 11.0 11.5 11.0 10.5 11.0 12.0 12.0 12.0 12.0 12.0	13.5 13.0 13.0 13.0 12.0 11.5 13.0 13.0 13.0 12.0 10.0 9.0 9.0	#IN 10.0 9.5 9.0 8.0 9.5 10.0 9.5 10.0 10.0 9.5 8.0
1 2 3 4 5 6 7 8 9 1 C 1 1 1 2 1 3 1 4 4 5 1 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MAX 4.5 6.0 5.5 6.0 7.0 9.0 7.0 7.0 8.0 7.0 8.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	0.5 2.0 1.5 1.5 3.5 3.5 3.5 4.5 4.0 2.0 2.0 2.0 2.0 3.5	8.5 9.5 10.0 4.5 10.0 7.0 8.5 7.0 0.9 8.5 9.5 9.5 10.5	MIN 3.05.55 5.55 5.60 4.55 4.00 6.55	11.5 12-0 11.5 10-5 10.0 10.5 10.5 9.5 9.0 8.9 8.9 8.9 8.9	MIN 6.5 8.0 9.0 8.5 9.0 8.5 7.0 6.0 6.5 6.5 6.6 8.0 7.0	12.0 13.0 13.0 13.0 12.0 12.0 12.0 11.5 11.5 14.5 14.5 14.5 14.5 15.5	9.5 9.0 9.5 10.0 11.0 10.5 10.0 11.5 10.5 11.5 11	MAX 14.5 14.5 15.0 13.5 14.5 15.5 15.5 16.0 14.5 16.0 14.5 14.0 14.0 13.5	10.5 10.5 10.5 12.0 11.0 11.5 11.0 11.5 11.0 11.5 12.0 12.0	13.5 13.0 13.0 12.0 9.0 11.5 13.0 13.0 13.0 13.0 10.0 9.0 9.0 9.5 10.5	MIN 10.0 9.5 9.0 8.0 9.5 10.0 10.0 9.5 8.0 6.0 8.0
1 2 3 4 5 6 7 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4.5 6.0 5.5 6.0 7.0 7.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	0.5 2.0 1.5 1.5 3.5 3.5 3.5 3.5 4.5 4.6 2.0 2.0 1.5	8.5 16.9 8.5 10.9 7.0 8.5 7.0 9.5 8.5 9.0 8.5 9.0	MIN 3.0 3.5 5.5 5.5 5.5 4.0 6.0 6.5	11.5 12.0 11.5 10.5 10.5 10.6 11.5 10.5 9.5 9.5 9.0 8.5 8.5 8.5	MIN 6.5 8.0 9.0 8.5 9.0 8.5 7.0 6.5 6.6 6.7 6.7 7.0	12.0 13.0 13.0 13.0 12.0 12.0 12.0 12.0 11.5 11.5 11.5 11.5 11.5 14.5 15.5	4.5 9.0 9.5 10.0 11.0 10.5 10.0 11.0 10.5 10.0 11.5 11.5	14.5 14.5 15.0 13.5 14.5 15.5 15.5 15.0 15.0 15.0 15.0 15.5 16.0 14.5 14.5 14.5	MIN 10.5 10.5 10.5 12.0 11.0 11.5 11.0 10.5 11.0 12.0 12.0 12.0 12.0 12.0	13.5 13.0 13.0 13.0 12.0 11.5 13.0 13.0 13.0 12.0 10.0 9.0 9.0	#IN 10.0 9.5 9.0 8.0 9.5 10.0 9.5 10.0 10.0 9.5 8.0
1 2 3 4 5 6 7 8 9 1 C 1 1 1 2 1 3 1 4 5 1 6 1 7 1 1 9 1 9	4.5 6.0 5.5 6.0 7.0 8.0 7.0 6.0 8.0 7.0 6.5 8.0 7.0 6.5 7.0 6.5 7.0 6.0 7.0 7.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7	MIN  0.5 2.0 1.5 1.5 3.0 3.5 3.5 3.5 3.5 3.5 3.7 2.0 3.7 2.0 1.5	8.5 9.5 10.9 4.5 10.9 7.0 8.5 7.0 8.5 9.0 9.0 10.2 9.0 9.0	3.05 5.05 5.55 5.55 5.55 4.05 5.55 6.55 6.55	MAX 11.5 12.0 11.5 10.5 10.6 10.6 10.7 10.7 10.8 9.5 9.6 9.0 8.5 8.5 8.5 10.5 10.5 10.5 10.5 10.5 10.5 10.5 10	MIN 6.5 8.0 9.0 9.5 9.0 8.5 9.0 6.5 6.5 6.7 9.0 9.0 9.5	MAX  12.C 13.0 13.0 13.0 12.0 12.0 12.0 12.1 12.0 14.0 14.0 14.5 15.5 15.5 15.5 15.5 15.5 14.5	4.5 9.0 9.5 10.0 11.0 10.5 10.0 11.5 10.0 11.5 11.5	MAX 14.5 14.5 15.5 15.5 15.5 15.5 15.6 15.5 16.0 15.5 14.5 14.5 14.6 14.6 14.0 14.0 14.0 14.5 14.0 13.5	MIN  10.5 10.5 10.5 10.5 11.0  11.0 11.5 11.0 11.5 11.0 11.5 11.0 11.5 11.0 11.5 11.0 12.0 12.0 12.0 12.0	MAX  13.5 13.0 13.0 12.0 9.0 11.5 13.0 13.0 13.0 13.0 10.0 9.0 9.0 9.0 9.0 8.5	MIN 10.0 9.5 9.0 8.0 9.5 10.0 10.0 10.0 6.5 6.0 8.0 8.0 6.5
1 2 3 4 5 6 7 8 9 1 C 1 1 2 3 1 4 5 1 6 1 7 1 1 1 2 0 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2	4.5 6.0 5.5 6.0 7.0 9.0 6.0 8.0 7.0 6.5 4.5 5.5 4.5 5.5 4.5	MIN  0.5 2.0 1.5 1.5 3.0 3.5 3.5 3.5 3.5 4.5 4.0 3.0 2.0 1.5 3.0 3.5 3.0 2.0 1.5 3.0	8.5 9.5 10.0 4.5 10.0 7.0 8.5 7.0 8.5 8.5 9.0 10.5 11.0 10.5 11.0 10.0 9.0 9.0	MIN 3.0 3.5 5.0 5.5 5.5 4.5 4.0 5.6 6.6 6.6 6.6 6.6	MAX 11.5 12.0 11.5 10.0 10.0 10.0 10.0 10.0 10.0 10	MIN 6.5 8.0 8.0 8.0 8.5 9.0 8.5 7.0 6.0 6.5 6.5 6.6 8.0 9.0 9.5 9.0	MAX  12.C 13.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 14.5 15.5 15.5 15.5 15.5 15.5 14.5	4.5 9.0 9.5 10.0 11.0 10.5 10.0 10.5 9.5 11.0 11.5 11.5 11.5 11.5 11.5 11.5 11	MAX 14.5 15.0 15.5 15.5 15.0 15.5 16.0 15.5 16.0 16.0 14.5 14.5 14.6 14.6 14.6 14.6 14.6 14.6 14.6 14.6	MIN  10.5 10.5 10.5 12.0 11.0 11.0 11.5 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	13.5 13.0 13.0 12.0 12.0 12.0 11.5 13.0 13.0 13.0 13.0 13.0 10.0 9.0 9.0 9.0 9.0 9.5 10.5 10.5 10.5	MIN 10.0 9.5 9.0 8.0 9.5 10.0 9.5 10.0 9.5 8.0 6.5 6.0 8.0 8.0 8.0
1 2 3 4 5 6 7 8 9 1 C 1 1 2 1 3 1 4 1 5 1 6 1 7 1 1 4 1 2 C 2 2 2 3	MAX 4.5 6.0 5.5 6.0 7.0 8.0 7.0 6.5 6.5 4.5 6.7 7.5 5.5 6.6	MIN  0.5 2.0 1.5 1.5 3.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 4.5 4.6 2.0 3.0 3.5 2.0 1.5 2.0 1.5 2.0 1.5	8.5 9.5 10.9 4.5 10.9 7.0 8.5 7.0 8.5 9.0 10.5 11.0 11.0 11.0 10.2 9.0 9.0 9.0	MIN 3.5.05 5.5 5.5 5.5 5.5 6.5 5.6 6.5 6.5 6.5 6.	MAX 11.5 12.0 11.5 10.0 10.5 10.5 9.6 9.0 8.9 8.9 8.9 8.9 10.5 12.6 13.0 13.5 12.6 13.6	MIN 6.5 8.0 8.0 8.5 9.0 8.5 7.0 6.5 6.6 6.6 7.0 9.0 9.0 9.0 9.0 9.0	MAX  12.C 13.0 13.0 12.0 12.0 12.C 12.C 12.C 11.5 11.C 14.0 14.5 15.5 15.5 15.5 15.5 14.5 14.5 14.5	4.5 9.0 9.5 10.0 11.0 10.5 10.0 10.5 10.0 11.0 11	MAX 14.5 14.5 15.0 15.5 15.5 15.0 15.5 14.5 14.0 14.0 14.0 13.5 14.0 13.5 14.0 14.0 13.5	MIN  10.5 10.5 10.5 11.0 11.0 11.5 11.0 11.5 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX  13.5 13.0 13.0 12.0 9.0 11.5 13.0 13.0 13.0 13.0 10.0 9.0 9.0 9.0 8.5 8.5 8.5 8.5	HIN 10.0 9.5 9.0 9.0 9.0 8.C 9.5 10.C 9.5 8.5 6.5 6.5 6.0 8.0 8.0 8.0
1 2 3 4 5 6 7 8 9 1 C 1 1 2 3 1 4 5 1 6 1 7 1 1 1 2 0 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2	4.5 6.0 5.5 6.0 7.0 9.0 6.0 8.0 7.0 6.5 4.5 5.5 4.5 5.5 4.5	MIN  0.5 2.0 1.5 1.5 3.0 3.5 3.5 3.5 3.5 4.5 4.0 3.0 2.0 1.5 3.0 3.5 3.0 2.0 1.5 3.0	8.5 9.5 10.0 4.5 10.0 7.0 8.5 7.0 8.5 8.5 9.0 10.5 11.0 10.5 11.0 10.0 9.0 9.0	MIN 3.0 3.5 5.0 5.5 5.5 4.5 4.0 5.6 6.6 6.6 6.6 6.6	MAX 11.5 12.0 11.5 10.0 10.0 10.0 10.0 10.0 10.0 10	MIN 6.5 8.0 8.0 8.0 8.5 9.0 8.5 7.0 6.0 6.5 6.5 6.6 8.0 9.0 9.5 9.0	MAX  12.C 13.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 14.5 15.5 15.5 15.5 15.5 15.5 14.5	4.5 9.0 9.5 10.0 11.0 10.5 10.0 10.5 9.5 11.0 11.5 11.5 11.5 11.5 11.5 11.5 11	MAX 14.5 15.0 15.5 15.5 15.0 15.5 16.0 15.5 16.0 16.0 14.5 14.5 14.6 14.6 14.6 14.6 14.6 14.6 14.6 14.6	MIN  10.5 10.5 10.5 12.0 11.0 11.0 11.5 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	13.5 13.0 13.0 12.0 12.0 12.0 11.5 13.0 13.0 13.0 13.0 13.0 10.0 9.0 9.0 9.0 9.0 9.5 10.5 10.5 10.5	MIN 10.0 9.5 9.0 8.0 9.5 10.0 9.5 10.0 9.5 8.0 6.5 6.0 8.0 8.0 8.0
1 2 3 4 5 6 7 8 9 1 C 1 1 1 2 1 1 3 1 4 5 1 1 7 1 1 9 2 C 2 2 2 2 2 2 2 2 5 5	4.5 6.0 5.5 6.0 7.0 9.0 6.0 8.0 7.0 6.5 4.5 5.5 4.5 5.5 4.5 5.5	MIN  0.5 2.0 1.5 1.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.6 3.0 2.0 1.5 3.0 2.0 1.5 3.0 2.0 1.5 3.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	8.5 9.5 10.0 4.5 10.0 7.0 8.5 7.0 8.5 8.5 9.5 8.5 9.5 10.5 11.0 10.2 9.0 10.5 11.0 10.0 9.0	MIN 3.0 3.5 5.5 5.5 5.5 4.5 4.0 5.5 6.0 6.5 6.6 6.6 6.6	MAX 11.5 12.0 11.5 10.0 10.0 10.0 10.0 11.5 10.5 9.6 9.0 8.5 8.5 8.5 8.5 10.5 12.0 13.5 12.6 13.5 13.5	MIN 6.5 8.0 8.0 8.0 8.5 9.0 8.5 7.0 6.0 6.5 6.5 6.6 8.0 9.0 9.5 9.0 9.5 9.5	MAX  12.C 13.0 13.0 12.0 12.0 12.0 12.0 12.0 14.0 14.5 14.5 15.5 15.5 15.5 15.5 16.5 14.5 14.5 14.5	4.5 9.0 9.5 10.0 11.0 10.5 10.0 10.5 9.5 11.0 11.5 11.5 11.5 11.5 11.5 11.0 12.0 13.0	MAX 14.5 15.5 15.5 15.5 15.5 15.0 15.5 16.0 15.5 14.0 13.5 14.0 13.5 14.0 13.5 14.0 14.0 13.5	MIN  10.5 10.5 10.5 11.0 11.0 11.5 11.0 11.5 12.0 12.0 12.0 11.5 12.0 12.0 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11	13.5 13.0 13.0 13.0 12.0 9.0 11.5 13.0 13.0 13.0 12.0 10.0 9.0 9.0 9.0 9.0 9.5 10.5 10.5 10.5 10.5 8.5 9.5 9.5 9.5 9.5 9.5 9.5	HIN 10.0 9.5 9.0 9.0 9.5 10.0 9.5 10.0
1 2 3 4 5 6 7 8 8 9 1 C 11 1 2 1 3 1 4 1 5 1 6 1 7 1 1 1 9 2 0 2 1 2 2 2 2 3 2 4 2 5 2 6 2 7	MAX 4.55 6.00 7.00 6.00 7.00 6.55 7.	0.5 2.0 1.5 3.5 3.5 3.5 3.5 3.5 4.0 2.0 2.0 3.5 3.7 2.0 3.5 2.0 2.0 2.0 2.0 3.5 2.0 2.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	8.5 9.5 10.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 9.5 9.5 10.5 11.0 11.0 9.0 10.5 11.0 9.0 10.5	MIN 3.0 5.0 5.5 5.5 5.5 4.5 4.0 5.5 6.0 6.5 6.0 6.5 6.0 6.5	MAX 11.5 12.0 11.5 10.0 10.0 10.0 10.0 11.5 10.5 9.6 9.0 8.5 8.5 8.5 8.5 12.0 13.5 13.5 13.5 13.5 13.5	MIN 6.5 8.0 8.0 8.0 8.5 9.0 8.5 7.0 6.0 6.5 6.5 6.6 8.0 9.0 9.5 9.0 9.5 10.0	MAX  12.C 13.0 13.0 13.0 12.0 12.0 12.0 11.5 11.5 11.5 11.5 14.5 15.5 15.5 15.5	4.5 9.0 9.5 10.0 10.5 10.0 10.5 10.0 10.5 10.5 11.5 11	MAX 14.5 15.0 15.5 15.5 15.0 15.5 16.0 15.5 16.0 14.5 14.0 13.5 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0	MIN  10.5 10.5 10.5 11.0 11.0 11.5 11.0 11.5 12.0 12.0 12.0 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11	MAX  13.5 13.0 12.0 9.0 11.0 11.5 13.0 13.0 12.0 9.0 9.0 9.5 10.5 10.5 10.5 8.5 8.5 9.5 9.6 8.6	NIN 10.0 9.5 9.0 9.0 9.5 10.0 9.5 10.0 9.5 8.0 6.5 6.0 8.0 8.0 8.0 6.5 6.0
12345 6789C I123145 1749C 2223245 2278	MAX 4.5 6.0 5.5 7.0 8.0 7.0 6.7 6.7 6.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0	MIN  0.5 2.c 1.5 3.c 3.5 3.5 3.5 3.5 3.5 3.5 3.5 4.c 3.0 3.5 3.c 1.5 2.c 1.5 2.c 1.5 2.c 2.c 2.c 3.5 2.c 2.c 3.5 3.5 3.5 3.6 3.6 3.6 3.7 3.6 3.7 3.6 3.7 3.6 3.7 3.6 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7	8.5 9.5 10.0 4.5 10.0 7.0 8.5 7.0 8.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	MIN 3.5.55.5 5.55.5 4.55.5 6.55.5 6.55.5 6.6	MAX 11.5 12.0 11.5 10.0 10.0 10.5 10.5 9.6 9.0 8.5 8.5 8.5 10.5 12.6 13.5 12.6 13.5 13.5 13.5 13.6 12.6	MIN 6.5 8.0 8.0 8.5 9.0 8.5 9.5 6.5 6.5 6.6 9.0 9.0 9.0 9.5 10.0 9.5	MAX  12.C 13.0 13.0 12.0 12.0 12.C 12.C 12.C 11.5 11.C 14.0 14.5 15.5 15.5 15.5 14.5 14.5 14.5 14.5	MIN 4.5 9.0 9.5 10.0 11.0 10.5 10.0 11.0 10.5 10.0 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5	MAX 14.5 14.5 15.5 15.5 15.5 15.5 15.6 15.5 16.0 16.5 14.5 14.5 14.6 14.6 14.6 14.6 14.6 14.6 14.6 14.7	MIN  10.5 10.5 10.5 11.0 11.0 11.0 11.5 11.0 11.5 12.0 12.0 12.0 12.0 12.0 12.0 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11	MAX  13.5 13.0 13.0 12.0 9.0 11.5 13.0 13.0 13.0 13.0 10.0 9.0 9.0 9.0 8.5 9.5 9.0 8.5 9.0 8.5 9.0	NIN 10.0 9.5 9.0 9.0 9.5 10.0 9.5 10.0 9.5 6.0 6.0 6.0 6.0 6.0 6.5 7.0 6.5 7.5
123345 6778 aC 1123145 1471 120 1122245 6778 227289	MAX 4.50 5.00 7.00 6.00 7.00 6.55 7.00 6.55 7.00 6.55 7.50 7.50 7.50 7.50 7.50 7.50 7.50 7	MIN  0.5 2.0 1.5 3.0 3.5 3.5 3.5 4.0 2.0 2.0 3.5 2.0 1.5 1.5 2.0 2.0 3.5 2.0 2.0 3.5 2.0 2.0 2.0	8.5 9.5 10.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 9.5 9.5 10.5 11.0 11.0 9.0 10.5 10.5 10.5 10.5 10.5 10.5 10.5 10	MIN 3.5.05.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5	MAX 11.5 12.0 11.5 10.0 11.5 10.0 11.5 10.5 9.5 9.5 9.0 8.0 7.0 8.0 13.0 13.5 12.0 13.5 13.5 13.5 13.6 13.6 13.6	MIN 6.5 8.0 8.0 8.0 8.5 9.0 8.5 7.0 6.5 6.5 6.6 8.0 7.0 9.5 9.5 10.5 9.5 10.5 7.0	MAX  12.C 13.0 13.0 13.0 12.0 12.0 12.0 11.5 11.5 11.5 11.5 14.5 14.5 15.5 15.5	4.5 9.0 9.5 10.0 10.5 10.0 10.5 10.0 10.5 11.5 11	MAX 14.5 15.5 15.5 15.5 15.5 15.0 15.5 15.0 15.5 14.0 14.5 14.0 13.5 14.0 14.5 14.5 14.0 13.5 14.0 13.5 14.0 13.5	MIN  10.5 10.5 10.5 11.0 11.0 11.5 11.0 11.5 12.0 12.0 12.0 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11	MAX  13.5 13.0 13.0 12.0 9.0 11.0 13.0 13.0 13.0 12.0 9.0 9.0 9.5 10.5 10.5 10.5 8.5 8.5 9.0 8.6 8.5	NIN 10.0 9.5 9.0 9.0 8.0 9.5 10.0 9.5 10.0 8.5 6.5 6.5 6.5 6.0 8.5 8.0 6.5 6.5
12345 6789C I123145 1749C 2223245 2278	MAX 4.5 6.0 5.5 7.0 8.0 7.0 6.7 6.7 6.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0	MIN  0.5 2.c 1.5 3.c 3.5 3.5 3.5 3.5 3.5 3.5 3.5 4.c 3.0 3.5 3.c 1.5 2.c 1.5 2.c 1.5 2.c 2.c 2.c 3.5 2.c 2.c 3.5 3.5 3.5 3.6 3.6 3.6 3.7 3.6 3.7 3.6 3.7 3.6 3.7 3.6 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7	8.5 9.5 10.0 4.5 10.0 7.0 8.5 7.0 8.5 9.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	MIN 3.5.55.5 5.55.5 4.55.5 6.55.5 6.55.5 6.6	MAX 11.5 12.0 11.5 10.0 10.0 10.5 10.5 9.6 9.0 8.5 8.5 8.5 10.5 12.6 13.5 12.6 13.5 13.5 13.5 13.6 12.6	MIN 6.5 8.0 8.0 8.5 9.0 8.5 9.5 6.5 6.5 6.6 9.0 9.0 9.0 9.5 10.0 9.5	MAX  12.C 13.0 13.0 12.0 12.0 12.C 12.C 12.C 11.5 11.C 14.0 14.5 15.5 15.5 15.5 14.5 14.5 14.5 14.5	MIN 4.5 9.0 9.5 10.0 11.0 10.5 10.0 11.0 10.5 10.0 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11.5	MAX 14.5 14.5 15.5 15.5 15.5 15.5 15.6 15.5 16.0 16.5 14.5 14.5 14.6 14.6 14.6 14.6 14.6 14.6 14.6 14.7	MIN  10.5 10.5 10.5 11.0 11.0 11.0 11.5 11.0 11.5 12.0 12.0 12.0 12.0 12.0 12.0 11.5 11.5 11.5 11.5 11.5 11.5 11.5 11	MAX  13.5 13.0 13.0 12.0 9.0 11.5 13.0 13.0 13.0 13.0 10.0 9.0 9.0 9.0 8.5 9.5 9.0 8.5 9.0 8.5 9.0	NIN 10.0 9.5 9.0 9.0 9.5 10.0 9.5 10.0 9.5 6.0 6.0 6.0 6.0 6.0 6.5 7.0 6.5 7.5
1 2 2 3 4 5 5 6 7 7 8 9 9 1 C 11 12 13 14 15 16 11 17 11 19 2 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	MAX 4.50 5.00 7.00 6.00 7.00 6.55 7.00 6.55 7.00 6.55 7.50 7.50 7.50 7.50 7.50 7.50 7.50 7	MIN  0.5 2.0 1.5 3.0 3.5 3.5 3.5 4.0 2.0 2.0 3.5 2.0 1.5 1.5 2.0 2.0 3.5 2.0 2.0 3.5 2.0 2.0 2.0 3.5	8.5 9.5 10.0 4.5 10.0 7.0 8.5 7.0 8.5 7.0 9.0 10.5 11.0 11.0 11.0 10.2 9.0 9.0 9.0 10.5 10.5 10.5 10.5 10.5 10.5 10.5 10	MIN 3.55.55 5.55 5.55 4.55 6.55 6.65 6.65 6.6	MAX 11.5 12.0 11.5 10.0 11.5 10.0 11.5 10.5 9.5 9.5 9.0 8.0 7.0 8.0 13.0 13.5 12.0 13.5 13.5 13.5 13.6 13.6 13.6	MIN 6.5 8.0 8.0 8.5 9.0 8.5 7.0 6.5 6.5 6.6 9.0 9.0 9.5 10.0 9.5 10.0 7.0 7.0 6.5	MAX  12.C 13.0 13.0 12.0 12.0 12.1 12.0 12.1 11.5 11.5 11.5 14.5 15.5 15.5 15.5 15	4.5 9.0 9.5 10.0 11.0 10.5 10.5 10.5 11.5 11.5 11	MAX 14.5 14.5 15.5 15.5 15.5 15.5 16.0 15.5 16.0 16.9 14.9 14.9 14.0 14.0 14.0 14.5 14.0 14.0 14.5 14.0 14.5 14.0 13.5 14.0	MIN  10.5 10.5 10.5 11.0 11.0 11.5 11.0 11.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX  13.5 13.0 13.0 12.0 9.0 11.0 13.0 13.0 13.0 12.0 9.0 9.0 9.5 10.5 10.5 10.5 8.5 8.5 9.0 8.6 8.5	NIN 10.0 9.5 9.0 9.0 9.0 9.5 10.0 10.0 10.0 6.5 6.0 6.0 6.5 7.0 6.5 7.5 8.0

## 10254450 EAST HIGHLINE CANAL NEAR NILAND, CALIF.

LOCATION.—Lat 33°16'42", long 115°31'32", in SE $\frac{1}{3}$ SW $\frac{1}{4}$ S wec. 21, T.10 S., R.14 E., Imperial County, at gaging station 2.8 miles northwest of Niland.

PERIOD OF RECORD. -- Chemical analyses: August 1969 to September 1970.

REMARKS. -- Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GFN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	NITRITE (NO2) (MG/L)	AMMONIA (NH4) (MG/L)
AUG 1969 13	1110	33	31.0	1.1				.00
SEP. 16	0900	27	28.0	.13				.15
DCT. 22	1005	-01	18.0	.19				.07
19	0935	.01	13.0	• 00				.00
DEC. 17	0815	•01	12.0	• 30				.00
JAN 1970 19	1645	10	15.0	.32		.32		.00
FEK. 17	1640	14	18.0	• 42		.54	•02	.15
MAR. 16	1715	36	19.2	-17		.49	•03	.41
APR. 21	1600	5.7	19.0	-58		.87	.01	.37
MAY 18	1545	37	28.0	1.1	1.4	1.1	•02	.00
JUNE 15	1600	36	27.0	.83	1.5	.94	.01	-14
AUG. 18	1600	37	33.0	.54	•95	.58	•03	.05
SEP. 22	1600	30	24.0	.42		.45		.04
			DIS- SOLVED	TOTAL SOL-	015-	DIS-	DIS-	
DATE	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	DRTHO PHUS- PHATE (PO4) (MG/L)	UBLE PHOS- PHATE (PO4) (MG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS ITONS PER AC-FTI	SOLVED SOLIDS (TONS PER DAY)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
DATE AUG 1969	(NO3) (MG/L)	PHATE (PU4)	DRTHO PHUS- PHATE (PO4)	UBLE PHOS- PHATE (PO4)	SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS ITONS PER	SOLVED SOLIDS (TONS PER DAY)	FIC COND- UCTANCE (MICRO-
DATE AUG 1969 13 SEP.	(103)	PHATE (PU4)	DRTHO PHUS- PHATE (PO4)	UBLE PHOS- PHATE (PO4)	SOLIDS (RESI- DUE AT 180 C)	SOLVED SOLIDS ITONS PER	SOLVED SOLIDS ITONS PER	FIC COND- UCTANCE (MICRO-
DATE AUG 1969 13	(NO3) (MG/L)	PHATE (PU4) (MG/L)	DRTHO PHUS- PHATE (PO4) (MG/L)	UBLE PHOS- PHATE (PO4) (MG/L)	SOLIDS (RESI- DUE AT 180 C) (MG/L) 850	SOLVED SOLIDS LTONS PER AC-FTI	SOLVED SOLIDS (TONS PER DAY)	FIC COND- UCTANCE (MICRO- MHOS) 1300
DATE AUG 1969 13 SEP. 16	(NO3) (MG/L)	PHATE (PO4) (MG/L)	DRTHO PHUS- PHATE (PO4) (MG/L)	UBLE PHOS- PHATE (PO4) (MG/L)	SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (TONS PER AC-FT)	SOLVED SOLIDS (TONS PER DAY)	FIC COND- UCTANCE (MICRO- MHOS)
DATE AUG 1969 13 SEP. 16 DCT. 22 NOV. 19 DEC.	(NO3) (MG/L) .7	PHATE (PO4) (MG/L)	DRTHO PHUS- PHATE (PO4) (MG/L)	UBLE PHOS- PHATE (PO4) (MG/L)	SOLIDS (RESI- DUE AT 180 C) (MG/L) 850	SOLVED SOLIDS ITONS PER AC-FTI 1,16	SOLVED SOLIDS (TONS PER DAY) 75.7 71.7	FIC COND- UCTANCE (MICRO- MHOS) 1300
DATE AUG 1969 13 SEP. 16 DCT. 22 NOV. 19 DEC.	(NO3) (MG/L) .7 .6 1.4	PHATE (P04) (MG/L) -17 -19	DRTHO PHUS- PHATE (PO4) (MG/L) .00	UBLE PHOS- PHATE (PO4) (MG/L) .00	SOLIDS (RESI- DUE AT 180 C) (MG/L) 850 984	SOLVED SOLIDS (TONS PER AC-FT) 1,16 1.34	SOLVEO SOLIDS (TONS PER DAY) 75.7 71.7	FIC COND- UCTANCE (MICRO- MHOS) 1300 1480
DATE AUG 1969 13 SEP. 16 DCT. 22 NOV. 19 DEC. 17 JAN 1970	(NO3) (MG/L) .7 .6 1.4	PHATE (PO4) (MG/L) .17 .19 .19 .18	DRTHU PHUS- PHATE (P04) (MG/L) .00 .02 .00	UBLE PHOS- PHATE (PO4) (MG/L) .00 .02 .06	SOLIDS (RESI- DUE AT 180 C) (MG/L) 850 984 952	SOL VED SOL IDS (TONS PER AC-FT) 1,16 1.34 1.29	SOLVEO SOLIDS (TONS PER DAY) 75.7 71.7 .26	FIC COND- UCTANCE (MICRO- MHOS) 1300 1480 1450
DATE AUG 1969 13 SEP. 16 DCT. 22 NOV. 19 DEC. 17 JAN 1970	(NO3) (MG/L) .7 .6 1.4 1.6	PHATE (PO4) (MG/L) -17 -19 -19 -18 -11	DRTHU PHUS- PHATE (P04) (MG/L) .00 .02 .00 .05	UBLE PHOS- PHATE (PO4) (MG/L) .00 .02 .06 .10	SOLIDS (RESI- DUE AT 180 C) (MG/L) 850 984 952 1030	SOLVED SOLIDS (TONS PER AC-FT) 1,16 1.34 1.29 1.40	SOLVEO SOLIDS (TONS PER DAY) 75.7 71.7 .26 .28	FIC COND- UCTANCE (MICRO- MHOS) 1300 1480 1450 1610
DATE AUG 1969 13 SEP. 16 DCT. 22 NOV. 19 DEC. 17 JAN 1970 19 FEH. 17	(NO3) (MG/L) .7 .6 1.4 1.6	PHATE (PU4) (MG/L) -17 -19 -19 -18 -11	DRTHU PHUS-PHATE (P04) (MG/L)  .00 .02 .00 .05 .03	UBLE PHOS- PHATE (PO4) (MG/L) .00 .02 .06 .10	SOLIDS (RESI- DUE AT 180 C) (MG/L) 850 984 952 1030 1020	SOLVED SOLIDS (TONS PER AC-FT) 1,16 1.34 1.29 1.40 1.39	SOLVEO SOLIDS (TONS PER DAY) 75.7 71.7 .26 .28 .03	FIC COND- UCTANCE (MICRO- MHOS) 1300 1480 1450 1610 1550
DATE AUG 1969 13 SEP. 16 DC1. 22 NOV. 19 DEC. 17 JAN 1970 19 FEH. 17 MAR. 16	(NO3) (MG/L) .7 .6 1.4 1.6 1.9	PMATE (PU4) (MG/L) .17 .19 .19 .18 .11 .06 .16	DRTHU PHUS- PHATE (P04) (MG/L) -00 -02 -00 -05 -03 -05	UBLE PHOS-PHATE (PO4) (MG/L) .00 .02 .06 .10 .03 .05 .00	SOLIDS (RESI- DUE AT 180 C1 (MG/L) 850 984 952 1030 1020 998	SOL VED SOL IDS (TONS PER AC-FT)  1.16 1.34 1.29 1.40 1.39 1.36	SOLVEO SOLIDS (TONS PER DAY) 75.7 71.7 .26 .28 .03 26.9 40.3	FIC COND- UCTANCE (MICRO- MHOS)  1300  1480  1450  1610  1550  1540  1570
DATE AUG 1969 13 SEP. 16 DCT. 22 NOV. 19 DEC. 17 JAN 1970 19 FEH. 17 MAR. 16 APR. 21	.7 .6 1.4 1.6 1.9 1.4 2.6	PHATE (PU4) (MG/L) .17 .19 .19 .18 .11 .06 .16 .53	DRTHD PHUS- PHUS- PHATE (P04) (MG/L) .00 .02 .00 .05 .03 .05 .00	UBLE PHATE (P04) (MG/L) .000 .02 .06 .10 .03 .05 .00 .13	SOLIDS (RESI- DUE AT 180 C) (MG/L) 850 984 952 1030 1020 998	SOL VED SOL IDS (TONS PER AC-FT) 1.16 1.34 1.29 1.40 1.39 1.36 1.43	SOLVED SOLIDS (TONS PER DAY) 75.7 71.7 .26 .28 .03 26.9 40.3	FIL COND- UCTANCE (MICRO- MHOS1 1300 1480 1450 1610 1550 1540 1570
DATE AUG 1969 13 SEP 16 DCT 22 NOV 19 UEC 17 JAN 1970 19 FEH 17 APR 21 ANY 18	.7 .6 1.4 1.6 1.9 1.4 2.6 2.6	PMATE (PD4) (MG/L) .17 .19 .19 .18 .11 .06 .16 .53 .23	DRTHD PHUS- PHATE (P04) (MG/L) .00 .02 .00 .05 .03 .05 .00 .00	UBLE PHOSE PHATE (PO4)	SOLIDS IRESI-DUE AT 180 C1 180 C1 180 C1 180 C1 180 C1 180 C1 1850 984 952 1030 1020 998 1050 ——————————————————————————————————	SOL VED SOL IDS (TONS PER AC-FT) 1.16 1.34 1.29 1.40 1.39 1.36 1.43 1.33	SOLVED SOLIDS (TONS PER DAY)  75.7  71.7  .26 .28 .03 26.9 40.3	FIC COND- COND- UCTANCE (MICRO- MHOSI)  1300  1480  1450  1610  1550  1540  1570   1450
DATE  AUG 1969 13 SEP 16 DCI 22 NOV 19 15 17 JAN 1970 11 MAR 16 APR 21 MAY 18 JUNE	.7 .6 1.4 1.6 1.9 1.4 2.6 2.6	PMATE (PD4) (MG/L) .17 .19 .19 .18 .11 .06 .16 .53 .23 .78	DRTHD PHUS- PHATE (PO4) .000 .02 .000 .05 .03 .05 .000 .02 .00	UBLE PHOS-PHATE (PO4) .00 .02 .06 .10 .03 .05 .00 .13 .07 .40	SOLIDS TRESI-DUE AT 180 C1 180 C1 180 C1 180 C1 180 C1 180 C1 1850 984 952 1030 1020 998 1050  976	SOL VED SOL IDS (TONS PER AC-FT)  1.16  1.34  1.29  1.40  1.39  1.40  1.33  1.24	SOLVEO SOLIDS (TONS PER DAY)  75.7  71.7  .26  .28  .03  26.9  40.3   15.0  91.3	FIC COND- COND- UCTANCE (MICRO- MHOSI)  1300  1480  1450  1610  1550  1540  1570   1450  1400

## 10254450 EAST HIGHLINE CANAL NEAR NILAND, CALIF .-- Continued

## CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

## PESTICIDE ANALYSES

	ALDRIN	DDD	DDT	DI- Eldrin	ENDRIN	HEPTA- CHLOR	HEPTA- CHLOR EPOXIDE	LINDANE
DATE	(UG/L)	(UG/L)	(ñe\r)	(UG/L)	(UG/L)	(UG/L)	_(UG/L)	(UG/L)
AUG 1969								
13 SEPT.	•00	•00		•00	• 00	•00	•00	•00
16 OCT.	•00	•00		•00	•00	.00	•00	.00
22 NOV.	.00	.00	.04	•00	•00	.00	.00	.00
19 JAN 1970	.00	•00	•02	•00	.00	.00	•00	•00
19 FEB.	.00	.00	.00	•00	•00	.00	•00	.00
17	•00	.00	•00	•00	•00	•00	•00	.00
18 JUNE	.00	.00	.00	•00	.00	.00	•00	.00
15 JULY	.00	.00	.00	•00	.00	.00	•0D	.00
14	.00	•00	.00	•00	•00	.00	.00	•00
AUG. 18	.00	.00	•00	•00	.00	.00	•00	.00
\$EPT. 22	.00	.00	.00	•00	.00	.00	-00	.00

2,4-0	SILVEX	2,4,5-7	CHLOR-	PARA-	METHYL Para-	MAL A-	DI- AZINON
(UG/L)	(UG/L)	(UG/L)	DANE (UG/L)	THION (UG/L)	THION (UG/L)	THION (UG/L)	{UG/L}
•00	•00	•00					
.00	.00	.00					
.00	.00	.00					
.16	.00	.00					
.00	.00	•00					
.00	.00	.01					
.00	.00	.00	•00				
.00	.00	.00	•00				
.00	•00	.00	•00				
.04	.00	-00					
				-00	-00	-00	•00
	.00 .00 .00 .16 .00 .00	(UG/L) (UG/L)  .00 .00 .00 .00 .16 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00	(UG/L) (UG/L) (UG/L)  .00 .00 .00 .00 .00 .00 .16 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00	CUG/L)         CUG/L)         CUG/L)         DANE CUG/L)           .00         .00         .00            .00         .00             .00         .00             .16         .00             .00              .00              .00              .00              .00              .00              .00              .00              .00              .00              .00              .00              .00              .00              .00 <td>(UG/L)         (UG/L)         (UG/L)         DANE (UG/L)         THION (UG/L)           .00         .00         .00             .00         .00         .00             .00         .00         .00             .16         .00         .00             .00         .00         .00             .00         .00         .01             .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00</td> <td>2,4-U   SILVEX   2,4,5-T   CHLOR-   PARA-   PARA-   THION   THION   THION   CUG/L)   CUG/L   C</td> <td>2,4-U   SILVEX   2,4,5-T   CHLOR- PARA   PARA   THION   THION</td>	(UG/L)         (UG/L)         (UG/L)         DANE (UG/L)         THION (UG/L)           .00         .00         .00             .00         .00         .00             .00         .00         .00             .16         .00         .00             .00         .00         .00             .00         .00         .01             .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00         .00         .00            .00         .00	2,4-U   SILVEX   2,4,5-T   CHLOR-   PARA-   PARA-   THION   THION   THION   CUG/L)   CUG/L   C	2,4-U   SILVEX   2,4,5-T   CHLOR- PARA   PARA   THION   THION

## 10254 580 ALAMO RIVER AT INTERNATIONAL BOUNDARY, NEAR CALEXICO, CALIF.

LOCATION. --Lat 32°40'26", long 115°22'12", in SEjSEJNWj sec.18, T.17 S., R.15 E., Imperial County, at gaging station at international boundary, 6.5 miles east of Calexico.

PERIOD OF RECORD .-- Chemical analyses: August 1969 to September 1970.

REMARKS. -- Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	NITRITE (NO2) (MG/L)	AMMONIA (NH4) (MG/L)
AUG 1969	0905	2.0	28.0	.56				.01
SEP. 16	1140	2.0	27.0	.87				.11
22	1240	2.0	19.5	.67				.07
19	1450	2.2	17.0	.36				.23
DEC. 17	1215	2.2	17.5	.25				.41
JAN 1970 20	0900	3.5	14.0	.57		.62		.06
FEB. 18	0900	2.5	15.5	.49		.67	•11	.23
MAR. 17	0930	2.0	17.5	.42		.76	.11	.44
APR. 22	1015	2.0	17.8	.36		.68	.11	.41
MAY 19	0930	1.6	22.5	1.4	1.8	1.4	.12	.03
JUNE 16	0800	1.4	20.5	1.0	1.6	1.1	.07	.18
AUG. 19	0730	2.1	27.5	.50	. 93	.57	• 08	.09
SEP. 22	1815	2.9	24.0	.60		.63		.04
DATE	ITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED ORTHO PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS+ SDL VED SDL IDS (TONS PER AC-FT)	DIS- SOLVEO SOL1OS (TONS PER DAY)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
AUG 1969								
13 SEP.	1.7	. 24	.05	•12	2010	2.73	10.9	3080
16 UCT.	•1	.38	.05	•05	2450	3.33	13.2	3630 38 <b>6</b> 0
22 NOV.	1.6	•37	-09	-18	2580	3.51	13.9	43B0
19 DEC.	2.9	.26	.04	.17	2940	4.00	17.5 14.8	3690
17 JAN 1970	3.6	1.7	.13	•24	2480	3.37		
20 FEB.	2.5	.32	.14	.14	2840	3.86	26.8	4240
18 MAR.	2.7	-28	.09	.08	2630	3.58	18.1	3860
17 APR.	_	.55	.13	.20				4720
MAY	2.6	.65	-18	.24	3220	4.38	17.4	3450
19 JUNE	1.4	1.9	•22	.80	2260	3.07 3.92	10.3	4370
16 AUG.	2.1	.37	.07	.26	2880			
19 SEP. 22	1.5	.26	.05	.13	2060 2500	2.80 3.40	11.7	3060 3690
44	1.3	-18	- 03	•03	2700	3.40	17.0	3090

# 10254580 ALAMO RIVER AT INTERNATIONAL BOUNDARY, NEAR CALEXICO, CALIF.--Continued CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

PESTICIDE ANALYSES

DATE	ALDRIN (UG/L)	DDD (UG/L)	DDT (UG/L)	DI- ELDRIN {UG/L}	ENDRIN	HEPTA- CHLDR	HEPTA- CHLOR EPOXIDE	LINDANE
	(00/2)	(00/1	(06/1)	106/67	(UG/L)	(UG/L)	(UG/L)	(UG/L)
AUG 1969 13	• OD	• DO		•00				
SEPT.	•00	•00		•00	•00	•00	•00	•00
16 OCT.	• OD	.01		•D0	•00	•00	.00	.00
22	.00	.01	.01	.00	.00	.00	. DD	.00
NOV. 19	.00	.01	.00	.00	.00	•00	•00	•00
JAN 1970			•00	•00	•00			
20 FEB.	.00	.00	.00	•D0	.00	•00	.00	.00
18	.00	.01	.01	.00	.00	.00	.00	.00
MAY 19	.00	.04	.05	.01	.00	•00	.00	.00
JUNE 16	.00	.01	.00	.00	•00	•00	.00	.00
JULY							•00	
14 AUG.	•00	.00	.01	•00	•00	•00		.00
19 SEPT.	.00	.00	.00	.00	•00	•00	.00	.00
22	.00	.00	.00	•00	•00	•00	•00	.00
	2,4-0	SILVEX	2,4,5-1	CHLOR- DANE	PARA- THION	METHYL PARA- THION	MAL A- THI ON	OI- AZINON
DATE	2,4-0 (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)			PARA-		
AUG 1969				DANE	THION	PARA- THION	THI ON	AZINON
AUG 1969 13 SEPT. 16	(UG/L)	(UG/L)	(UG/L)	DANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	(UG/L)	AZ INON
AUG 1969 13 SEPT. 16 OCT.	.00	(UG/L)	(UG/L)	DANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19	.00	.00	.00 .00	OANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970	.00 .00	.00 .00	.00 .00	DANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 20 FEB. 18	.00 .00 .00	.00 .00 .00	.00 .00 .00	OANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZINON (UG/L)  
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 20 FEB.	.00 .00 .00 .00	.00 .00 .00 .00	.00 .00 .00 .00	DANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZĪNON (UG/L)  
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 20 FEB MAY 19 JUNE 16	.00 .00 .00 .00 .07 .03	.00 .00 .00 .00 .02 .00	.00 .00 .00 .00	DANE (UG/L)	THION (UG/L)	PARA-THION (UG/L)	THION (UG/L)	AŽĪNON (UG/L)  
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 20 FEB. 18 MAY 19 JULY 14	.00 .00 .00 .07 .03 .14	.00 .00 .00 .02 .00 .00	.00 .00 .00 .00 .00	OANE (UG/L)	THION (UG/L)	PARA—THION (UG/L)	THION (UG/L)	AŽĪNON (UG/L)
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 20 FEB. 18 MAY 19 JUNE 16 JULY	.00 .00 .00 .07 .03 .14	.00 .00 .00 .02 .00 .92	.00 .00 .00 .00 .00	OANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AŽĪNON (UG/L)

## 10254600 ALAMO RIVER AT DROP NO. 9, NEAR HOLTVILLE, CALIF.

PERIOD OF RECORD .-- Chemical analyses: August 1969 to June 1970 (discontinued).

REMARKS. -- Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST 1969 TO JUNE 1970

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	NITRITE (NO2) (MG/L)	AMMONIA (NH4) (MG/L)
AUG 1969	0945	217	30.0	.97				•01
SEPT. 16	104D	166	27.0	.69				17
22	1140	326	18.8	.68				14
19 DEC.	1200	129	15.0	.00				22
17 JAN 1970	1000	197	12.5	4.5				5.9
20 FEB.	1100	197	14.8	.10		10		13
18 MAR.	0730	148				18	2.9	
17 APR.	0700	227	17.2			11	3.1	
22 MAY	0845	294	19.0	2.0		10	1.2	10
19 JUNE	0745	302	23.2	2.3	14	8.8	3.3	8.4
16	0845	248	22.5	2.0	15	8.2	1.8	8.0
OATE	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED ORTHO PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SDLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
AUG 196								
SEPT.	57	1.5	• 29	•78	1980	2.69	1160	2920
16 OCT.	23	1.7	•47	.92	2370	3.22	1060	3640
22 NOV.	26	3.5	2.0	2.0	2090	2.84	1840	3140
19	41	1.6	1.4	1.4	3700	5.03	1290	530D
17 JAN 197		5.7	1.8	4.2	2490	3.39	1320	3650
20 FEB.	30	3.2	1.3	2.7	2390	3.25	1270	3570
18 MAR.	18	.90	.82	.87	2970	4.04	1190	4280
17 APR.	8.0	4.5	2.4	2.6				
22 May	21	2.8	1.1	2.5	2100	2.86	1670	307 <b>0</b>
JUNE	20	7.2	2.0	3.1	2220	3.02	1810	3200
16	29	1.8	-17	.84	2020	2.75	1350	3060

# 10254600 ALAMO RIVER AT DROP NO. 9, NEAR HOLTVILLE, CALIF.--Continued CHEMICAL ANALYSES, AUGUST 1969 TO JUNE 1970

PESTICIDE ANALYSES

	ALDRIN	000	DOT	DI- ELDRIN	ENDRIN	HEPTA- CHLOR	HEPTA- CHLOR EPOXIDE
DATE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
AUG 196	•00	.04		• 06	.02	•00	.00
16	.00	•02		•03	.02	.00	.00
22 NOV.		.03	.05	.03	.00	•00	.00
19 JAN 197	.00	•01	.01	.01	.00	.00	.00
20 FEB.	.00	•02	.02	-01	.00	•00	.00
18	.00	.00	.01	.00	.00	• 00	•00
19 JUNE	.00	•02	.01	•02	.00	.00	.00
16	.00	.02	•02	.01	.00	•00	-00
	LINDANE	2,4-0	SILVEX	2,4,5-T	CHLCR-	PARA-	METHYL PARA- THION
DATE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	DANE (UG/L)	THEON (UG/L)	(UG/L)
AUG 196	.01	.17	•00	•00	.00		.06
SEP. 16	.00	1.8	.17	•00	.00		.10
22 NOV.	.00	1.1	03	.00		.77	.45
19 JAN 197	.01	.25	.04	.00		•04	
20 FEB.	•01	2.7	. 86	.00		• 22	.21
18	.00	.23	2.2	•00			
19 JUNE	.00	2.0	.28	•00	•00		
16	.00	.90	.00	•00	.00		

## 10254670 ALAMO RIVER AT DROP NO. 3, NEAR CALIPATRIA, CALIF.

LOCATION.--Lat 33°06'13", long 115°32'38", on line between secs.19 and 20, T.12 S., R.14 E., Imperial County, at gaging station 2.2 miles southwest of Calipatria.

PERIOD OF RECORD. -- Chemical analyses: August 1969 to June 1970 (discontinued).

REMARKS .-- Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANÁLYSES, AUGUST 1969 TO JUNE 1970

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DRGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL KJEL+ DAHL NITRO- GEN (N) (MG/L)	AMMONIA (NH4) (MG/L)	NITRATE (NO3) (MG/L)
AUG 1969 13	1030	620	31.0	1.3			.01	95
SEP.								
16 DCT.	0935	495	28.0	1.4			.23	26
22	1040	812	18.5	1.4			2.7	27
NOV.								
19	1035	348	14.5	3.0			2.6	29
UEC. 17 JAN 1970	0845	545	12.5	3.7			4.6	36
19 FEB.	1715	596	14.5	.80		8.4	9.8	32
17 MAR.	1710	460	16.5			6.4		30
16 4PR.	1745	788	19.0			4.6		9.0
21 MAY	1630	848	18.0	2.3		4.3	2.6	20
18	1615	752	27.0	1.0	8.0	1.8	1.1	21
15	1630	752	24.5	2.6	12	4.9	3.0	28

10254670 ALAMO RIVER AT DROP NO. 3, NEAR CALIPATRIA, CALIF.--Continued
CHEMICAL ANALYSES, AUGUST 1969 TO JUNE 1970

	CHEMI	CAL ANALI	363, AUGU	121 TAGA 1	O JONE TA	10	
DATE AUG 1969	PHDS- PHATE (PG4) (MG/L)	DIS- SOLVED ORTHO PHDS- PHATE (PO4) (MG/L)	SOL- UBLE PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
13	1.5	.01	.57	2660	3.62	4450	3960
SEP. 16	1.4	.06	•42	2780	3.78	3720	4140
22	1.3	.92	.93	2520	3.43	5530	3690
NOV. 19	1.1	.34	.43	3640	4.95	2310	5300
DEC. 17	2.5	1.4	1.6	2760	3.75	4060	4110
JAN 1970							
19 FER.	2.6	•59	1.8	2880	3.92	4630	4310
17 MAR.	1.2	•57	•64	3660	4.98	4550	5120
16 APR.	2.4	1.0	1.0				
21 MAY	3.8	1.0	2.4	2450	3.33	5610	3570
18 JUNE	6.7	1.2	1.8	2460	3.35	5000	3640
15	1.9	.21	.74	2240	3.05	4550	3350
		P	ESTICIDE	ANALYSES			
	ALDRIN	DOD	DOT	DI- ELDRIN	ENDRIN	HEPTA- CHLOR	HEPTA- CHLOR EPOXIOE
DATE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
AUG 1969						_	
13 SEP.	•00	- 04		•03	•02	• 00	• DO
16	•00	•04		•03	•03	•00	•00
22		.03	.04	.02	•00	.00	.00
NOV .	.00	.03	.03	.01	•00	.00	.00
JAN 1970 19	•00	•02	.03	.01	•01	.00	.00
FEO. 17	.00	.02	.02	.00	•00	.00	•00
MAY 18	.00	.02	• 02	.02	•00	.00	.00
JUNE 15	•00	.02	•02	•01	•00	•00	•00
17	•	•02	•02	• • • •	•00	•00	•00
	LINDANE	2,4-0	SILVEX	2,4,5~T	CHL CR- DANE	PARA- THION	METHYL PARA- THION
DATE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
AUG 1969	.01	•0D	.01	•00			.12
SEP. 16	• 00	3.6	•72	•00	.04		•35
υςτ. 22	.00	1.3	.03	.00		.71	.49
NUV. 19	.00	1.8	• 02	•00		. 21	-26
JAN 1970	.00	.00	•00	•00		•10	•07
FE8. 17	•00	1.5	15	•03			
MAY 18	.00				•00		.13
JUNE 15	.00	.20	.10	.00	•00		
		•==	•••	•00			

## 10254730 ALAMO RIVER NEAR NILAND, CALIF.

LOCATION.--Lat 33°12'03", long 115°36'07", in NE\{SW\ne\} sec.22, T.11 S., R.13 E., Imperial County, at gaging station on left bank, 0.6 mile upstream from mouth and 5.8 miles southwest of Niland.

PERIOD OF RECORD. --Chemical analyses: October 1963 to September 1964, October 1966 to September 1967 (partial records), August 1969 to September 1970.

REMARKS. -- Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	NITRITE (NO2) (MG/L)	AMMONIA [NH4] (MG/L)
AUG 196	9 1225	766	31.0	• 59				•00
SEP. 16	0825	635	27.0	1.1				•12
UCT. 22	0855	984	17.8	.99				1.2
107.	0850	416	14.0	5.5				4.5
DEC. 17	0730	653	11.5	3.3				3.7
JAN 197		766	15.0	.50		5.2		6.1
FEB.						2.0	3.7	2.5
17 MAR.	1600	535	17.0	.00				
16 APR.	1545	984	20.0			6.5	4.7	
21 MAY	1500	1060	19.0	1.8		4.3	2.0	3.2
1014E	1500	917	27.0	1.7	8.0	2.1	4.6	•57
15 AUG.	1500	861	24.5	2.2	12	4+3	2.9	2.7
18 SEP.	1445	747	31.5	1.5	5.5	1.8	3.4	•37
22	1515	913	23.0	1.0		1.6		•66
DATE	NITRATE (NO3) (MG/L)	PHOS~ PHATE (PU4) (MG/L)	OIS- SOLVED ORTHO PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHDS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIOS (TONS PER DAY)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
AUG 1969	•							
13 SEP.	96	1.5	• 21	• 54	2610	3.55	5400	3670
16	25	1.3	• 05	.37	2850	3.88	4890	4200
22	28	1.7	1.1	1.1	2430	3.30	6460	3560
19 DEC.	34	1.6	•35	.43	3600	4.90	4040	5300
17 JAN 1970	37	3.0	1.3	1.8	2710	3.69	4780	4010
19 FEB.	33	2.0	.36	1.2	2580	3.51	5340	3930
17 MAR.	30	2.1	1.5	1.5	3240	4.41	4680	4670
16	9.0	2.1	.88	.88				
APR. 21	20	4.1	1.0	2.4	2360	3.21	6750	3460
18	20	7.3	.68	1.2	2400	3.26	5940	3560
15	31	1.6	.15	.64	2740	3.05	5210	3330
18	16	1.2	.19	.25	2490	3.39	5020	3610
SEP. 22	18	2.3	. 54	1.1	2190	2.98	5400	3220

## 10254730 ALAMO RIVER NEAR NILAND, CALIF .-- Continued

## CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

PESTICIDE ANALYSES

	ALDRIN	DDD	DDT	DI- ELDRIN	ENDR IN	HEPTA- CHLDR	HEPTA- CHLOR EPOX IDE	LINDANE
DATE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(NE\F)
AUG 1969 13 SEPT.	.00	•00	• 00			.16		
16 OCT.	1.0	.35	•00	•03		• 28		
22 NOV.		.03	+12	.03	•00	.00	•00	.01
19 JAN 1970	.00	•04	.54	.01	.00	•00	•00	.00
19 FEB.	.00	.06	•09	.01	.03	•00	.00	.00
17 MAY	•00	.04	.06	.01	.04	.00	•00	-01
18	•00	•08	.06	•02	.02	.00	•00	•00
15 JULY	.00	.03	.03	.01	.02	.00	.00	.00
14 AUG.	.00	.03	• C Z	•02	.00	.00	.00	•00
18 SEPT.	.00	.02	•02	.00	.01	•00	.00	•00
22	•00	.03	•C1	.00	.00	.00	•00	.00
	2,4-0	SILVEX	2,4,5-T	CHLOR-	PARA- THION	METHYL PARA- THION	MALA- THEON	DI- AZINON
DATE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
AUG 1969 13 SEPT.	•00	• 05		.03	.02	.00	•00	.01
16 OCT.	.00	.05		.03	•00	•00	•00	•00
22 NOV.	19	.07	.00		.84	•65		
19 JAN 1970	.42	.05	.00		. 27	.15	•15	
19 FE8.	.04	.12	.00			.11		
17 MAY	1.1	1.7	.00		.08	.10		
18	.23	.09	.oc	.00		.04		
15 JULY		.01	.00	.00				
14 AUG.	2.2	.12	.00	•00				
18 SEPT.	.24	.08	.00	.00	.31	.37		
22	2.2	.08	.00	.00	.62	•59	.00	.00

## 10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CALIF.

LOCATION.--Lat 32°39'57", long 115°30'08", in NEJSWISE sec.14, T.17 S., R.14 E., Imperial County, at gaging station at Second Street bridge, 0.2 mile downstream from international boundary and 0.2 mile west of Calexico.

PERIOD OF RECORD, -- Chemical analyses: August 1969 to September 1970.

REMARKS. -- Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATÉ	TIME	DIS~ CHARGE (CFS)	TEMPER- ATURE (DEG C)	ORGANIC NITRO~ GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL KJEL- OAHL NITRO- GEN (N) (MG/L)	AMMONIA (NH4) (MG/L)	NITRATE {NO3} (MG/L)
AUG 1969	0835	147	31.0	•30			.31	6.9
SEP. 16	1110	156	30.0	1.6			1.4	.8
22 29	1210	108	21.0	2.1			4.5	.4
NOV. 19	1350	145	19.0	2.6			4.2	.8
DEC. 17	1145	122	15.0	7.4			3.2	2.5
JAN 1970 20	0830	141	14.5	1.2		3.2	2.6	2.3
FE8. 18	0820	152	16.0			5.0		2.4
MAR. 17 APR.	0830	169	18.5			4.0		3.7
22	0945	202	17.5	2.6		6.0	4.4	1.3
19	0900	153		1.7	2.8	2.7	1.3	
JUNE 16	0715	117	22.5	2.5	4.8	4.5	2.6	.8
AUG. 19 20	0700	123	30.5	1.5	2 • 2	1.9	•52 ~-	•7
SEP. 22	1745	118	26.5	2.7		4.8	2.6	.1
DATE	PHOS PHAT (PO4 (MG/	E PHAT ( PO4	ED SO ID UB I- PHO E PHA () (PO	L- SOL LE SOL S- (RE TE DUE 4) 180	VEO 015 IDS SOLV SI- SOLI AT (TOM C) PER	IEO SOLVI IDS SOLII IS (TON: PER	D FIC S CONE S UCTAN (MICR	-  CE  O-
AUG 1						12 208	•	
13 SEP.						13	. 07	
16 OCT.						20	- 02	80
22			2 3	-4 4		45 138 19 -		80
NOV.	. 12	2.	5 2	.2 6	380 8.	68 250	0 103	00
0EC. 17	. 5.	6 .	76 6	.3 5	220 7.	10 172	0 83	40
JAN 1 20		.0	82 1	.4 4	750 6.	46 181	.0 75	10
FEB. 18 MAR.	. 2.	0 1.	3 1	•3 6	190 8.	.42 254	0 96	40
17 APR.	. 2.	1 .	94 1	.1			-	
22	. 3.	6 1.	.6 1			97 239		60 20
MAY 19		.3 1.	.5 2	.3 4		.00 182	20 71	.40
JUNE 16.				.89 4	380 5	96 13:	30 68	90
AUG. 19 20	. 1.	1 .	10			70 139		60 40
SEP. 22.		.7 3.	.0 3	.0 4	250 5	.78 13	50 66	40

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# 10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CALIF.--Continued CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

## PESTICIDE ANALYSES

DATE	ALDRIN	000 (UG/L)	DDT (UG/L)	DI- ELDRIN (UG/L)	ENDR IN	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)
DATE	106717	106/11	10671	106/1	(00/1)	100/11	100/21	100/17
AUG 1969 13 SEPT.	.00	•06		•02	•00	.00	•00	•03
16	•00	•07		.03	.02	.00	.00	.20
22 NJV.		.45	1.2	•02	•01		-00	
19 JAN 1970								
20 FEB.	.00	.07	.13	-01	•00	•00	•00	-01
18 MAY	.00	.03	.07	.01	•00	.00	•00	.00
19 JUNE	•00	.01	.00	.00	.00	.00	•00	•00
16 JULY	.00	.05	•03	.00	•00	.00	.00	.00
14 AUG.	.00	.01	.00	•02	•00	•00	•00	.00
19 SEPT.	•00	.03	•02	.00	.00	.00	.00	.00
22	.00	.10	.19	•00	.00	.00	•00	-04
						METHYL		D1-
	2 + 4-D	SILVEX	2,4,5-1	CHLOR- DANE	PARA- THEON	METHYL PARA- THION	MAL A- THI ON	DI- AZINON
DATE	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T			PARA-		
				DANE	THEON	PARA- THION	THI ON	AZINON
AUG 1969				DANE	THEON	PARA- THION	THI ON	AZINON
AUG 1969 13 SEPT. 16	(UG/L)	(UG/L)	(UG/L)	DANE (UG/L)	TH(ON (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZINON
AUG 1969 13 SEPT. 16 DCT. 22	.00	(UG/L)	(UG/L)	DANE (UG/L)	TH(ON (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZINON
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19	.00	.00 .00	.00	DANE (UG/L)	TH(ON (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZINON
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 20	.00	.00 .00	.00 .00	DANE (UG/L)	TH(ON (UG/L)	PARA- THION (UG/L)	THION (UG/L)	### AZTNON (UG/L)
AUG 1969 13 SEPT. 16 DCT. 22 NOV. 19 JAN 1970 20 FEB. 18	.00	.00 .00 .00	.00 .00 .00	DANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 DCT. 22 NOV. 19 JAN 1970 20 FEB. 18 MAY	.00	.00 .00 .00 .00	.00 .00 .00	DANE (UG/L)	THION (UG/L)	.01 	THION (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 DCT. 22 NOV. 19 JAN 1970 20 FEB. 18 MAY 19 JUNE 16	.00	.00 .00 .00 .00	.00 .00 .00 .00	DANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 20 FEB. 18 MAY 19 JUNE 16 JULY	.00 .00 .00 .00	.00 .00 .00 .00 .00	.00 .00 .00 .00	DANE (UG/L)		PARA- THION (UG/L)	THION (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 UCT. 22 NOV. 19 JAN 1970 20 FEB. 18 MAY 19 JUNE 16 JULY	.00 .00 .00 .00 .00	.00 .00 .00 .00 .00 .00	.00 .00 .00 .00 .00	.07 ·	TH(ON (UG/L)	PARA- THIOM (UG/L) .01	THION (UG/L)	

## 10255450 NEW RIVER NEAR IMPERIAL, CALIF.

LOCATION.--Lat 32°54'50", long 115°36'20", in SW‡SW‡SW‡ sec.23, T.14 S., R.13 E., Imperial County, at gaging station at Keystone Road bridge, 4.6 miles northwest of Imperial.

PERIOD OF RECORD. -- Chemical analyses: August 1969 to June 1970 (discontinued).

REMARKS. -- Records of discharge furnished by Imperial Irrigation District.

## CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	NITRITE (NO2) (MG/L)	AMMONIA (NH4) (MG/L)
AUG 196 13 SEP.	1330	349	31.0	.78				.01
16	1010	407	27.0	1.9				. 23
22 22	1115	349	17.8	.94				.75
19	1120	344	16.0	1.8				1.7
DEC. 17 JAN 191	0915	301	13.0	2.5				5.9
20	0730	310	15.0	•60		2.3		2.2
FEB. 18 MAR.	0700	29 <b>9</b>	16.0			7.0	2.6	
17	0630	449	18.5			1.6	2.5	
4PR. 22	0745	468	16.5	1.8		4.0	1.3	2.8
19	0700	374	24.0	.44	3.3	2.1	2.0	2.1
JUNE 15	1715	330	26.0	1.4	5.0	3.2	.68	2.3
DATE	VITRATE (NO3) (MG/L)	PHOS- PHATE (PD4) (MG/L)	DIS- SOLVED ORTHO PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER OAY)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
AUG 196	59 14	20	•66				2000	
SEP.				1.3	4220	5.74	3980	6740
16 JCT.	3.0	2.0	.28	.58	4290	5.83	4710	6680
22	9.5	1.7	.86	.82	3840	5.22	3620	6090
19 DEC.	5.8	1.7	.25	.64	5090	6.92	4730	8000
17 JAN 19	18	3.4	1.3	2.6	4490	6.11	3650	7080
20 FEB.	8.7	2.0	.57	1.3	4820	6.56	4030	7600
18	8.2	2.2	1.4	1.5	5610	7.63	4530	8710
17	13	2.5	1.0	1.1				
22 MAY	7.7	3.5	1.2	2.7	3880	5.28	4900	5950
19	2.7	5.0	.79	1.3	3930	5.34	3970	6090
JUNE 15	7.0	1.6	•35	.78	3840	5.22	3420	5950

## PESTICIDE ANALYSES, AUGUST TO SEPTEMBER 1969

DATE	ALDRIN (UG/L)	ODD (UG/L)	OI- ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	METHYL PARA- THION (UG/L)	CHLJR~ DANE (UG/L)	2+4+0 (UG/L)	2,4,5-T (UG/L)	SILVEX
AUG 1969 13 SEPT.	•00	•06	•03	.01	• 00	.OD	•02	.13		.24	•00	.01
16	• 00	.05	.03	.01	.00	•00	-04	•05	• 06	.19	•00	.13

## 10255550 NEW RIVER NEAR WEST MORLAND, CALIF.

LOCATION.--Lat 33°06'17", long 115°39'49", in SW\u00e4SW\u00e4SW\u00e4SW\u00e4SW\u00e4SW. R.13 E., Imperial County, at gaging station on right bank, 3.5 miles upstream from mouth and 5.2 miles northwest of Westmorland.

PERIOD OF RECORD. --Chemical analyses: October 1963 to September 1964, October 1966 to September 1967 (partial records), August 1969 to September 1970.

REMARKS. -- Records of discharge furnished by Imperial Irrigation District.

CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

DATE	FIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	NITRITE (NO2) (MG/L)	AMMONIA (NH4) (MG/L)
AUG 196	9 1250	479	32.0	.63				•01
16	0755	617	27.0	2.1				.23
22	0825	619	18.8	.93				.33
19	0800	390	15.0	.66				•97
17 JAN 1970	U700	483	12.8	2.9				2.2
19 FEB.	1415	485	16.0	.50		1.5		1.3
17 MAR.	1400	446	18.0	.76		1.6	• 02	1.0
16 APR.	1520	615	20.5			2.9	1.5	
21 MAY	1315	706	18.5	2.0		4.1	.90	2.7
18 JUNE	1300	626	27.0	1.3	5.3	2.3	1.8	1.3
15 AUG.	1230	530	23.5	2.4	7.5	4.0	.29	2.1
18 SEP.	1415	547	31.5	1.4	4.6	1.6	.71	.33
22	1345	536	23.0	1.6		1.7		.12
DATE	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	OIS- SOLVED ORTHO PHOS- PHATE (PO4) (MG/L)	TOTAL SOL- UBLE PHOS- PHATE (PO4) (MG/L)	OIS- SOLVED SOLIOS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIOS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)
AUG 1969	11	2.2	•49	•98	3650		4720	
SEP.						4.96		5750
16 OCT. 22	21	1.0	•37	•77	3810	5.18	6350	5940
70V.	13	2.2	.64	.69	2940	4.00 6.47	4910	4620
DEC.					4760		5010	7520
17 JAN 1970 19	2? 19	3.9 2.0	1.8	2.3	3780	5.14 5.24	4930	5870
FER. 17	15	-89	.63 .71	.75	3850 4520	6.15	5040	6020 7090
MAR. 16	9.0	1.6	1.4	1.5	4520	0.15	5440	7090
4PR. 21	14	3.5	.93	2.1	3380	4.60		5140
MAY 18	11	6.1	.76	1.5	3230	4.39	6440	4970
JUNE 15	15	2.0	•74	.80	3150	4.28	5460	4840
AUG. 18	12	1.9	.14	.74	3120	4.28	4510	4840
SEP.	10	2.1	•52	.52	3060	4.16	4610	4690
	10	c • 1	• 52		3000	4.10	4430	4070

## 10255550 NEW RIVER NEAR WESTMORLAND, CALIF. -- Continued

## CHEMICAL ANALYSES, AUGUST 1969 TO SEPTEMBER 1970

## PESTICIDE ANALYSES

DATE	ALDRIN (UG/L)	0DD (UG/L)	DDT (UG/L)	OI- ELDRIN (UG/L)	ENDRIN	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)
			*		,			
AUG 1969 13	.00	• 04		• 03	.01	•00	•00	•02
SEPT.								
16 OCT.	•00	• 09.		•03	•02	•00	• 00	-04
22 NOV.		•04	+04	-01	.00	•00	•00	•02
19	.00	.06	.05	•02	•00	•00	.00	.01
JAN 1970 19	.00	.03	.04	.01	.00	.00	•00	.00
FEB.								
17	•00	.03	.05	•01	.00	.00	•00	•00
18 JUNE	.00	•04	.04	•02	.01	.00	•00	.00
15	.00	-04	•02	.01	.00	.00	-00	.00
JULY 14	.00	•02	•C2	•02	.00	.00	.00	.00
AUG. 18	.00	.03	•01	.00	.00	.00	•00	•00
SEPT.								
22	•00	.01	.01	•00	-00	.00	•00	•00
DATE	2,4-0 (UG/L)	STLVEX (UG/L)	2,4,5-T.	CHLCR- DANE (UG/L)	PARA~ THION (UG/L)	METHYL PARA- THION (UG/L)	MALA- THI ON (UG/L)	DI- AZINON (UG/L)
AUG 1969				DANE	THION	PARA- Thion	TH I ON	AZINON
AUG 1969				DANE	THION	PARA- Thion	TH I ON	AZINON
AUG 1969 13 SEPT. 16	(UG/L)	(UG/L)	(UG/L)	DANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THION (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 DCT.	(UG/L)	(UG/L)	(UG/L)	DANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THI ON (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 OCT. 22 NOV.	.32	.03	.00 .00	DANE (UG/L)	THION (UG/L)	PARA- THION (UG/L)	THI ON (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970	.32 .09	.03 .55	.00 .00	DANE (UG/L)	THION (UG/L)	PARA- THION (UG/L) .25 .19	THI ON (UG/L)	AZINON (UG/L)  
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 19 FEB. 17	.32 .09 1.6	.03 .55 .02	.00 .00 .00	DANE (UG/L)	THION (UG/L)37 .08	PARA- THION (UG/L) .25 .19 .07	THI ON (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 19 FEB. 17 MAY	.32 .09 i.6 .14	.03 .55 .02 .05	.00 .00 .00 .00	O 5	THION (UG/L)	.25 .19 .07 .06	THI ON (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 19 FEB. 17	.32 .09 1.6 .14 .10	.03 .55 .02 .05 .01	.00 .00 .00 .00 .00	DANE (UG/L)05	37 .08	PARA—THION (UG/L)  .25 .19 .07 .06 .0203	THI ON (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 DCY. 22 NOV. 19 JAN 1970 19 FEB. 17 MAY 18 JUNE 15 JULY	.32 .09 1.6 .14 .10 .16	.03 .55 .02 .05 .01 .60	.00 .00 .00 .00 .00 .00	.05  .05  .00		PARA—THIOM (UG/L)  .25 .19 .07 .06 .0203	THI ON (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 DCY. 22 NOV. 19 JAN 1970 19 FEB. 17 MAY 18 JULY 14 AUG.	.32 .09 1.6 .14 .10 .16	.03 .55 .02 .05 .01	.00 .00 .00 .00 .00	DANE (UG/L)05	37 .08	PARA—THION (UG/L)  .25 .19 .07 .06 .0203	THI ON (UG/L)	AZINON (UG/L)
AUG 1969 13 SEPT. 16 OCT. 22 NOV. 19 JAN 1970 19 FEB. 17 MAY 18 JUNE 15 JULY	.32 .09 1.6 .14 .10 .16	.03 .55 .02 .05 .01 .60	.00 .00 .00 .00 .00 .00	.05  .05  .00		PARA—THIOM (UG/L)  .25 .19 .07 .06 .0203	THI ON (UG/L)	AZINON (UG/L)

342 OWENS LAKE BASIN

## 10278300 LOS ANGELES AQUEDUCT AT OUTLET, AT SAN FERNANDO, CALIF.

LOCATION.--Lat 34°18'46", long 118°29'32" (unsurveyed), Los Angeles County, in Mission de San Fernando substation at Los Angeles Aqueduct outlet at upper end of Van Norman Lake at San Fernando.

PERIOD OF RECORD. -- Chemical analyses: October 1966 to September 1967 (partial records), October 1967 to September 1970.

REMARKS, -- Records furnished by California Department of Water Resources and reviewed by U.S. Geological Survey. Records of discharge furnished by Los Angeles Department of Water and Power.

CHEMICAL ANALYSES. WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	CHE	MICAL ANA	LYSES, WA	TER YEAR	OCTOBER 1	969 TO SE	PTEMBER 1	970	
DATE	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)	SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SUDIUM (NA) (MG/L)	PO- TAS- S IUM (K) (MG/L)	SULFATE (SU41 (MG/L)
UCT. 21	300	15.0	11.2	18	23	7.0	31	4.0	40
NOV. 18	491	12.8	10.6	21	25	7.0	37	4.0	37
DEC. 16	462	8.9	11.7	22	24	8.0	37	4.0	33
JAN. 20	568	7.8	11.6	20	27	8.0	36	4.0	33
FEB. 17	357	7.8	11.8	23	27	7.0	40	5.0	44
MAR. 17 APR.	350	10.0	11.4	23	28	8.0	43	5.0	37
21 M4Y	553	12.2	10.2	23	29	11	44	4.0	41
19 JUNE	539	16.1	9.8	27	30	8.0	45	5.0	39
23 JULY	725	21.1	8.8	23	28	8.0	42	5.0	34
21 AUG.	768	23.9	8.2	22	26	6.0	39	4.0	30
18 SEP.	768	23.9	8.6	22	24	8.0	33	4.0	28
?2	779	26.1	8.8	25	24	6.0	33	4.0	16
DATE	CHEO- RIDE (CE) (MG/L)	DIS- SOLVED FLUU- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	OIS- SOLVED BORON (B) (UG/L)	HARD- NESS (CA,MG) (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
21	15	.5	1.0	570	86	42	1.5	322	8.3
NOV. 18	16	.6	.5	500	91	46	1.7	345	8.0
DEC. 16	15	•6	.4	640	93	45	1.7	348	8.1
JAN. 20	16	.5	.3	500	100	43	1.6	376	8.1
FF8.	18	.5	1.1	720	96	46	1.8	380	
MAR. 17	20	.5	1.0	520	103	46	1.8	404	8.3
APR. 21 MAY	19	.6	. 3	520	118	44	1.8	427	8.3
19 JUNE	21	. 7	.3	630	108	46	1.9	420	8.3
23 JULY	20	.6	.6	480	103	46	1.8	394	8.3
21 AUG.	16	. 3	.3	410	90	47	1.8	358	8.4
18	14		_					222	
SEP.	14	. 3	.1	410	93	42	1.5	322	8.3

#### WALKER RIVER BASIN

## 10301500 WALKER RIVER NEAR WABUSKA, NEV. (Irrigation network station)

LOCATION. --Lat 39°09'10", long 119°05'50", in SE½NW½ sec.20, T.15 N., R.26 E., Lyon County, at gaging station on left bank, 600 ft upstream from timber bridge at Julian Ranch, 1.8 miles downstream from Southern Pacific Railroad bridge, 4.6 miles east of Wabuska, and 16 miles upstream from Weber Dam.

DRAINAGE AREA. -- 2,600 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: October 1968 to October 1969 (daily), October 1969 to September 1970 (monthly).
Water temperatures: October 1968 to September 1970.

EXTREMES. --1969-70: Specific conductance: Maximum daily, 678 micromhos Nov. 7; minimum daily, 219 micromhos June 7. Water temperatures: Maximum, 32.0°C July 19; minimum, freezing point on several days during January.

Period of record:

Dissolved solids (1968-69): Maximum, 468 mg/l Dec. 11-14, 1968; minimum, 128 mg/l June 1-30, 1969. Hardness (1968-69): Maximum, 162 mg/l Dec. 11-14, 1968; minimum, 56 mg/l June 1-30, 1969. Hardness (1968-69): Maximum daily, 729 micromhos Dec. 13, 1968; minimum daily, 183 micromhos June 26, 1969. Water temperatures: Maximum daily, 183 micromhos June 26, 1969. Water temperatures: Maximum, 32.0°C July 19, 1970; minimum, freezing point on several days during December to March each year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE NOV.	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SIO2) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCD3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
20	1035	118	2.5	24	49	12	79	5.4	251	0	89	29
22	1045	146	3.5	26	45	11	80	5.5	226	0	95	30
JAN. 28	1005	855	3.5	16	23	5.0	23	3.0	118	0	21	6.8
D2	1100	238	6.0	22	33	7.4	44	3.8	165	0	53	15
APR. 10	1015	50	10.9	25	51	12	84	5.4	244	0	106	34
MAY 19	1100	138	16.5	21	35	8.4	45	5.1	171	0	55	17
JUNF 15	0945	294	14.5	17	29	7.1	39	4.0	151	0	41	11
JUL V	1020	179	24.5		30	6.9	39	4.8	160	0	40	11
18	1045	70	21.0	28	50	12	56	6.7	200	0	94	25
SEPT. 24	1125	43	12.0		43	9.5	60	5.0	216	0	67	22
	FLU0- RIDE			DIS- SOLVED SOLIOS (RESI-	OIS- SOLVED SOLIOS (SUM OF	OIS- SOLVED SOLIDS		SDOTUM AO- SOR P-	HARD-	NON- CAR- BONATE	SPECI- FIC COND-	
DATE	(F) (MG/L)	NITHATE (NO3) (MG/L)	8090N (8) (UG/L)	DUE AT 180 C) (MG/L)	CONSTI- TUFNTS) (MG/L)	(TONS PER AC-FT)	PERCENT SODIUM	TION RATIO	NESS (CA,MG) (MG/L)	HARD- NESS (MG/L)	UCTANCE (MICRO- MHOS)	PH (UNITS)
NOV. 20	(F)	(NO3)	(8)	180 C)	TUFNTS)	PER			(CA,MG)	NESS	IMICRO-	
NOV. 20 DEC. 22	(F) (MG/L)	(NO3) (MG/L)	(B) (UG/L)	180 C) (MG/L)	(MG/L)	PER AC-FT)	SODIUM	RATIO	(CA,MG) (MG/L)	NESS (MG/L)	(MICRO- MHOS)	(UNITS)
NOV. 20 DEC. 22 JAN. 28	(F) (MG/L) 1.0	(NO3) (MG/L)	(B) (UG/L) 500	180 C) (MG/L) 420	1UFNTS) (MG/L) 413	PER AC-FT)	SOD I UM 49	2.6	(CA,MG) (MG/L) 172	NESS (MG/L)	MHOS)	(UNITS)
NOV. 20 DEC. 22 JAN. 28 MAR. 02	(F) (MG/L) 1.0 1.4	(NO3) (MG/L) .4	(B) (UG/L) 500 570	180 C) (MG/L) 420 420	1UFNTS) (MG/L) 413 406	PER AC-FT) .57	SODIUM 49 51	2.6 2.8	(CA,MG) (MG/L) 172 158	NESS (MG/L) O	(MICRO- MHOS) 659 651	(UNITS) 7.8 7.5
NOV. 20 DEC. 22 JAN. 28 MAR. 02 APR. 10	(F) (MG/L) 1.0 1.4	(NO3) (MG/L) .4 1.9	(B) (UG/L) 500 570 170	180 C) (MG/L) 420 420 165	1UFÑTS) (MG/L) 413 406 157	.57 .57	50DIUM 49 51 38	2.6 2.8 1.1	(CA,MG) (MG/L) 172 158 78	NESS (MG/L) O O	659 651 256	7.8 7.5 7.3
NOV. 20 DEC. 22 JAN. 28 MAR. 02 APR. 10 MAY	(F) (MG/L) 1.0 1.4 .5	(NO3) (MG/L) .4 1.9 1.0	(B) (UG/L) 500 570 170 240	180 C) (MG/L) 420 420 165 257	1UFÑTS) (MG/L) 413 406 157 261	PER AC-FT) .57 .57 .22	50DIUM 49 51 38 45	2.6 2.8 1.1 1.8	(CA,MG) (MG/L) 172 158 78	NESS (MG/L) 0 0 0	659 651 256	(UNITS) 7.8 7.5 7.3 7.4
NOV. 20 DEC. 22 JAN. 28 MAR. 02 APR. 10 MAY 18 JUNF 15	(F) (MG/L) 1.0 1.4 .5 .7	(NO3) (MG/L) .4 1.9 1.0	(B) (UG/L) 500 570 170 240 590	180 C) (MG/L) 420 420 165 257 452	1UFNTS) (MG/L) 413 406 157 261 439	.57 .57 .22 .35	\$001UM 49 51 38 45	2.6 2.8 1.1 1.8 2.7	(CA,MG) (MG/L) 172 158 78 113	NESS (MG/L) 0 0 0	(MICRO-MHOS) 659 651 256 416 683	7.8 7.5 7.3 7.4 8.1
NOV. 20 DEC. 22 JAN. 28 MAR. 02 APR. 10 4AY 18 JUNE 15 JULY 21	(F) (MG/L) 1.0 1.4 .5 .7	(NO3) (MG/L) .4 1.9 1.0 1.0	(B) (UG/L) 500 570 170 240 590 420	180 C) (MG/L) 420 420 165 257 452	1UFNTS) (MG/L) 413 406 157 261 439 271	.57 .57 .22 .35 .61	\$001UM 49 51 38 45 50 43	2.6 2.8 1.1 1.8 2.7	(CA, MG) (MG/L) 172 158 78 113 176	NESS (MG/L) 0 0 0 0	(MICRO-MHOS) 659 651 256 416 683 442	(UNITS) 7.8 7.5 7.3 7.4 8.1 7.1
NOV. 20 DEC. 22 JAN. 28 02 APR. 10 4AY 18 JUNE 15 JULY	(F) (MG/L1) 1.0 1.4 .5 .7 1.0	(NO3) (MG/L) .4 1.9 1.0 1.0	(8) (UG/L) 500 570 170 240 590 420 200	180 C) (MG/L) 420 420 165 257 452 287 231	1UFNTS) (MG/L) 413 406 157 261 439 271 223	.57 .57 .57 .22 .35 .61 .39	\$001UM 49 51 38 45 50 43 44	2.6 2.8 1.1 1.8 2.7 1.8	(CA, MG) (MG/L) 172 158 78 113 176 122	NESS (MG/L) 0 0 0 0 0	(MICRO-MHOS) 659 651 256 416 683 442	7.8 7.5 7.3 7.4 8.1 7.6

					TOTAL KJEL-	
DATE	TOTAL PHOS- PHORUS AS PO4 (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	AMMONIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N)	DAHL NITRU- GEN (N)	COLOR (PLATI- INUM- COBALI
NUV.	(1107 117	(MG/L)	(MG/L)	(MG/L)	(MG/L)	UNITS
2C	.89	.17	.03	. 84	. 86	20
22 JAN.	1.1	.49	• 05	•90	.94	3
28 MAR.	•95	•4I	•00	.31	.31	
32 APK.	.49	.36	.00	1.2	1.2	5
01 YAM	.64	.43	.08	. 33	.39	10
18 JUNE	.83	.57	.09	1.1	1.2	
15 JULY	.78	.38	•00	•57	.57	10
21 AUG.	.64	•64	.01	.74	. 75	10
18 SEPT.	.70	• 56	•00	• 90	.90	16
24	.54	.43	.06	• 42	.47	

## WALKER RIVER BASIN

## 10301500 WALKER RIVER NEAR WABUSKA, NEV .-- Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

					TONCE -DAI	LI HEADON	LINEIN					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	467	635		473	312	400	404	607	300	263	476	435
2	454	642	630	437	316	403	435	584	284	297	472	404
3	462	639	630	365	317	385	536	616	250	319	492	459
1 2 3 4	456	641	633	358	328	363	541	650	246	340	485	463
5	459	655	632	435	359	361	541	608	243	417	533	455
6 7	442	654	616	463	359	366	593	552	240	418	484	427
7	431	678	622	464	355	372	603	556	219	379	46 L	435
8	439	669	622	477	354	347		551	226	411	477	435
9	463	648	608	473	348	336	673	534	226	411	492	445
10	541	650	634	481	355	333	638	549	244	468	490	518
11	539	641	645	458	350	335	634	527	286	431	435	541
12	542	644	613	470	350	359	535	543	308	427	458	538
13	555	635	625	460	363	394	505	524	331	452	520	602
14	596	634	638	426	369	409	520	592	345	478	561	529
15		651	612	415	366	400	502	568	338	521	551	528
16	582	632	612	412	368	346	506	563	344	526	462	444
17	588	637	622	417	374	348	541	511	378	514	397	444
18	568	627	648	323	386	360	529	456	406	523	447	452
19	563	635	608	297	366	363	489	453	415	391	404	454
20	565	616	616	316	358	367	476	454	244	386	427	473
21	572	609	640	357	355	377	469	539	248	377	477	518
22	576	612	638	310	359	374	523	529	268	415	474	499
23	587	625	647	311	373	376	540	561	223	410	472	470
24	589	545	612	268	386	3T8	582	548	221	484	508	501
25	590	545	471	260	391	375	628	550	222	475	500	563
26	602	616	500	260	400	396	628	471	237	507	467	494
27	601	569	458	255	405	404	676	423	237	485	466	479
28	597	608	397	252	405	420	613	256	235	507	432	589
29	<b>60</b> 6	540	384	270		419	596	2 89	238	488	433	492
30	633	606	430	299		376	568	327	274	505	466	538
31	634		434	312		394		298		484	465	

TEMPERATURE	(°C)	OF	WATER,	WATER	YEAR	OCTOBER	1969	то	SEPTEMBER	1970
			CONCE	E-DAIL'	Y MEAS	SUREMENT:	)			

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AVG 543 624 582 373 361 375 552 509 275 435

UAY	OCT	NOA	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	7.0	3.0	0.0	5.0	9.0	12.0	19.0	22.0	19.0	24.0	21.0
2	18.0	11.0	3.0	4.0	7.0	7.0	12.0	20.5	20.0	27.0	19.0	23.0
3	13.0	B • O	4.0	0.0	8.0	7.0	12.5	20.0	17.0	23.0	26.0	16.5
4	12.0	18.0	1.0	0.0	7.5	6.0	16.0	23.0	20.0	25.0	24.5	17.0
5	12.0	10.0	3.0	0.0	8.0	8.5	18.0	19.0	20.0	30.0	30.0	18.0
6	12.0	9.0	4.0	1.0	8.0	10.5	15.5	15.0	21.0	26.0	25.0	22.0
7	12.0	7.0	4.0	0.0	8.0	11.0	16.0	17.C	20.0	25.0	27.0	22.0
8	12.0	6.0	4.0	0.0	8.5	8.0		15.5	16.0	22.0	24.5	23.0
9	12.0	8.0	3.0	4.0	8.0	9.0	14.5	17.0	18.0	21.0	27.5	22.0
10	11.0	7.0	3.0	5.0	8.0	9.5	10.5	18.0	17.0	23.0	29.5	24.0
11	9.0	8.0	5.0	4.0	10.0	8.0	13.0	18.0	15.0	26.0	27.5	25.0
12	10.0	9.1	3.0	4.0	9.0	12.0	17.0	21.0	17.0	28.0	30.0	17.0
13	9.0	5.0	5.0	5.0	7.5	14.0	10.5	19.0	17.0	24.0	27.0	17.0
14	6.9	8.0	4.0	5.0	7.0	12.0	9.0	18.5	18.0	27.0	24.5	15.0
15		8.0	2.0	2.0	8.0	10.0	14.0	23.0	20.0	27.0	27.0	16.0
16	11.0	8.9	4.0	6.0	8.0	12.0	16.0	22.5	21.0	28.0	25.0	15.0
1,7	9.0	6.0	3.0	7.C	8.0	9.5	12.0	25.0	23.0	26.0	26.0	14.0
18	8.0	5.0	5.0	10.0	7.5	9.0	13.5	19.0	22.0	29.0	27.0	20.0
19	10.0	6.0	4.0	7.0	6.5	10.0	14.0	18.0	25.0	32.0	24.0	
20	10.0	4.0	3.0	6.0	5.5	11.0	13.0	20.0	25.0	26.0	19.0	17.0
21	12.9	6.0	0.7	5.0	8.0	12.0	10.0	23.0	22.9	25.0	24.0	11.5
22	12.0	5.0	0.5	7.0	9.0	12.0	10.5	23.0	22.0	25.0	27.0	16.0
23	13.0	9.0	8.0	7.0	6.5	13.5	14.0	19.0	22.0	25.0	23.5	18.0
24	12.0	6.0	4.0	5.0	8.0	14.0	16.5	21.5	24.0	25.0	24.0	17.0
25	12.0	4.0	5.0	5.0	9.8	12.0	10.0	26.0	22.0	25.0	27.5	15.0
26	10.0	5.0	3.0	6.0	9.5	12.5	8.0	20.5	23.0	25.0	25.0	19.0
27	11.0	4.0	4.0	6.0	11.0	15.0	10.0	18.0	20.C	25.0	25.5	21.0
28	11.0	3.0	0.1	5.0	7.0	12.0	9.0	19.0	19.0	26.0	26.0	18.0
29	10.0	4.0	3.0	3.0		8.0	17.0	21.0	17.0	24.0	25.0	19.5
30	10.0	4.7	0.1	4.5		10.0	14.0	15.0	17.0	27.0	22.5	20.0
31	11.0		0.1	4.5		8.0		20.5		26.0	21.0	
AVG	11.3	6.9	3.1	4.1	7.9	10.3	13.0	19.8	20.0	25.5	25.3	18.6

## 10309000 EAST FORK CARSON RIVER NEAR GARDNERVILLE, NEV.

LOCATION.--Lat 38°50'50", long 119°42'10", in SW\nE\frac{1}{2} sec. 2, T.11 N., R.20 E., Douglas County, temperature recorder at gaging station on left bank, 0.1 mile downstream from Horseshoe Bend, 2 miles east of Mud Lake Reservoir, 4.5 miles downstream from Eryant Creek, and 7 miles southeast of Gardnerville.

DRAINAGE AREA. -- 341 sq mi.

PERIOD OF RECORD, -- Water temperatures: July 1955 to September 1970.

EXTREMES, -- 1969-70:
Water temperatures: Maximum, 24.0°C July 19; minimum, freezing point on several days during December to February.

Period of record:
Water temperatures: Maximum (1955-65, 1966-70), 29.5°C Aug. 7, 1960; minimum (1955-63, 1963-67, 1968-70), freezing point on many days during winter periods.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		-	EMPERATURE	: (°C) UF	WAIEK, WA	AIEK TEAK	UCTUBER .	1464 ID 2		1710		
DAY	00	τ.	NO	٧	DE	C	J	N.	F	В	M	AR
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2	18.0	12.0 11.5	9.0 9.0	5.5	2.0	1.0	1.0	0.5	2.0 2.0	0.5	5.5 3.0	3.0 1.0
3	13.0	9.0	9.5	5.5 5.5	2.D 2.0	1.5	1.0	0.5	3.0	1.0	4.5	1.0
4	11.5	6.5	9.5	6.5	2.0	1.5	0.5	0.0	4.0	2.0	4.0	1.0
5	11.5	6.5	9.0	7.0	2.0	1.5	0.0	0.0	4.0	2.0	4.5	1.0
6	11.5	6.5	8.0	6.5	2.0	1.5	0.0	0.0	4.0	2.0	5.5	1.5
7	13.0	7.0	6.5	5.0	2.0	1.0	0.0	0.0	4.0	1.5	5.5	2.0
8	13.5	9.0	7.0	4.5	3.5	1.5	0.0	0.0	4.0	1.5	6.0	3.5
9	13.5	9.0	6.5	4.5	3.5	2.0	0.0	0.0	3.5	3.0	4.5	2.0
10	11.5	9.0	6.5	4.0	4.0	2.0	1.5	0.0	3.5	3.0	4.5	1.5
11 12	11.0	7.C 6.C	6.5	4.0	4.0	3.0	1.5	1.0	5.5 5.0	3.0 3.5	4.0 6.5	2.0 3.0
13	10.0	6.0	7.0 7.0	4.5 4.5	4.5	3.0 4.0	1.5	0.5 1.0	3.5	1.5	8.5	5.0
14	8.0	6.5	6.5	4.5	4.5	2.0	3.5	1.0	3.0	0.5	8.5	5.5
15	8.0	6.5	6.0	4.5	3.5	2.0	1.0	0.5	3.0	1.0	7.0	4.0
.,	10 )	8.0								1.0	, =	
16 17	10.J 9.0	6.5	6.5 5.5	5.0 3.0	3.5 3.5	1.5 2.0	2.0	1.5 1.0	3.0 3.0	1.0	6.5 6.5	3.5 4.5
18	8.0	6.5	4.0	2.0	5.0	3.0	3.0	1.5	2.0	0.5	5+0	2.0
19	9.0	5.0	4.0	2.0	5.0	4.0	3.0	1.5	2.0	0.5	5.0	1.0
20	9.5	5.5	4.5	2.0	5.0	4.5	3.5	2.0	2.0	0.0	5.5	1.5
21	10.0	6.0	5.0	3.5	5.0	3.5	3.5	3.0	3.0	0.5	6.5	3.0
22	11.0	6.5	5.0	3.0	3.5	1.5	3.5	2.0	4.5	1.5	6.5	3.5
23	10.0	7.0	4.5	2.0	3.5	2.0	3.0	2.0	4.5	1.5	8.0	4.5
2 <b>4</b> 25	9.5 9.5	7•0 5•5	4.5 4.0	2.0	4.5 4.5	3.5 3.0	3.0 1.5	1.5 0.5	4.5 5.0	2.0 2.0	8.0 7.0	4.5 4.0
26 27	8.5	6.0	4.0	1.5	3.0	1.0	2.0	1.0	5.0	2.0	6.0	3.5
28	8.C 9.0	6.0 5.5	3,5	1.5	1.5	1.0	3.0 2.0	2.0 0.0	5.5 5.5	3 • 0 4 • 5	6.0 6.5	2.0 3.0
29	8.5	5.0	3.5	1.5 1.5	1.0	0.5	1.0	0.0	3.3	4.5	6.0	3.5
30	8.5	5.0	2.0	1.5	1.0	0.5	1.0	0.0			5.5	3.5
31	8.5	5.0			1.0	0.0	1.0	0.5			4.0	3.0
AVG	10.5	6.9	5.9	3.6	3.1	1.9	1.7	0.8	3.6	1.6	5.8	2.8
DAY	ΔΡ	R	мл	v	11	IN			A	ıc		En
DAY	AP		MA		J		J		A	JG		ЕP
DAY	AP Max	R M1N	MAX	MIN	JU MAX	NI M	JL XAM	JL MIN	AL MAX	JG MIN	MAX	EP Min
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
I	MAX 6.5	M1N	MAX 11.0	MIN 6.5	MAX 13.5	MIN 9.0	MAX 16.0	MIN 11.5	MAX 19.5	MIN 14.0	MAX 19.0	MIN 15.0
I 2	MAX 6.5 8.0	M1N 1.5 4.0	MAX 11.0 11.5	MIN 6.5 6.5	MAX 13.5 13.5	MIN 9.0 9.0	MAX 16.0 18.0	MIN 11.5 13.5	MAX 19.5 20.0	MIN 14.0 14.0	MAX 19.0 19.0	MIN 15.0
I 2 3 4	MAX 6.5 8.0 7.0 8.0	M1N 1.5 4.0 4.0 3.5	MAX 11.0 11.5 11.5	MIN 6.5	MAX 13.5	9.0 9.0 9.5 9.5	MAX 16.0	MIN 11.5 13.5 14.5	MAX 19.5	MIN 14.0	MAX 19.0	MIN
I 2 3	MAX 6.5 8.0 7.0	M1N 1.5 4.0 4.0	MAX 11.0 11.5 11.5	MIN 6.5 6.5 8.0	MAX 13.5 13.5 14.0	9.0 9.0 9.0 9.5	MAX 16.0 18.0 17.0	MIN 11.5 13.5	MAX 19.5 20.0 20.5	MIN 14.0 14.0 15.0	MAX 19.0 19.0 19.0	MIN 15.0 15.0 15.0
I 2 3 4	6.5 8.0 7.0 8.0 9.0	M1N 1.5 4.0 4.0 3.5 5.0	11.9 11.5 11.5 11.0	6.5 6.5 8.0 8.0	MAX 13.5 13.5 14.0 14.0	9.0 9.0 9.5 9.5	MAX 16.0 18.0 17.0 18.0 19.0	MIN 11.5 13.5 14.5 14.5	MAX 19.5 20.0 20.5 20.5 20.5	MIN 14.0 15.0 15.0 15.0	19.0 19.0 19.0 17.0 16.5	MIN 15.0 15.0 15.0 14.5 13.5
I 2 3 4 5	6.5 8.0 7.0 8.0 9.0	M1N 1.5 4.0 4.0 3.5 5.0	MAX 11.9 11.5 11.5 11.0 10.5	MIN 6.5 6.5 8.0 8.0	MAX 13.5 13.5 14.0	9.0 9.0 9.5 9.5	MAX 16.0 18.0 17.0 18.0	MIN 11.5 13.5 14.5 14.5	MAX 19.5 20.0 20.5 20.5 20.0	MIN 14.0 14.0 15.0 15.0 14.5	MAX 19.0 19.0 17.0 16.5	MIN 15.0 15.0 15.0 14.5 13.5
I 2 3 4 5 6 7 8	MAX 6.5 8.0 7.0 8.0 9.0 8.5 8.0	M1N 1.5 4.0 4.0 3.5 5.0 5.0	MAX 11.5 11.5 11.0 10.5	MIN 6.5 6.5 8.0 6.0 6.0	MAX 13.5 13.5 14.0 12.0 14.5 14.5	9.0 9.0 9.5 9.5 9.0 9.5	MAX 16.0 18.0 17.0 18.0 19.0	MIN 11.5 13.5 14.5 14.5 15.0 15.0	MAX 19.5 20.0 20.5 20.5 20.0 20.0 19.5 19.5	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5	19.0 19.0 19.0 17.0 16.5	MIN 15.0 15.0 15.0 14.5 13.5
I 2 3 4 5 6 7 8 9	MAX 6.5 8.0 7.0 8.0 9.0 8.5 8.0 8.0	M1N 1.5 4.0 3.5 5.0 5.0 5.0	11.0 11.5 11.5 11.0 10.5	MIN 6.5 8.0 8.0 6.0 5.0 6.0	MAX 13.5 14.0 14.0 12.0 14.5 14.5 14.0	9.0 9.0 9.5 9.5 9.5 9.0	MAX 16.0 18.0 17.0 18.0 19.0 18.5	MIN 11.5 13.5 14.5 14.5 15.0	MAX 19.5 20.0 20.5 20.5 20.0 20.0 19.5 20.0	MIN 14.0 15.0 15.0 14.5 14.5 14.5	MAX 19.0 19.0 17.0 16.5 18.0 19.5 20.0	MIN 15.0 15.0 14.5 13.5 13.5 15.0 15.5
I 2 3 4 5 6 7 8 9	MAX 6.5 8.0 7.0 8.0 9.0 8.5 8.0 8.0	M1N 1.5 4.0 4.0 3.5 5.0 5.0 5.0 4.5	MAX 11.9 11.5 11.5 11.0 10.5 10.0 9.5 11.5	MIN 6.5 6.5 8.0 6.0 6.0	MAX 13.5 13.5 14.0 12.0 14.5 14.5	9.0 9.0 9.5 9.5 9.0 9.5	MAX 16.0 18.0 17.0 18.0 19.0 18.5 18.0 19.0 18.5	MIN 11.5 13.5 14.5 14.5 15.0 15.0	MAX 19.5 20.0 20.5 20.5 20.0 20.0 19.5 19.5	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5	19.0 19.0 19.0 17.0 16.5	MIN 15.0 15.0 15.0 14.5 13.5
1 2 3 4 5 6 7 8 9 10	6.5 8.0 7.0 8.0 9.0 8.5 8.0 8.0 9.0	M1N 1.5 4.0 3.5 5.0 5.0 5.0 4.5 5.5	MAX 11.9 11.5 11.5 11.0 10.5 10.0 9.5 11.5	MIN 6.55 8.00 6.00 6.00 6.55 6.00	MAX 13.5 13.5 14.0 12.0 14.5 14.5 14.0 13.0	9.0 9.0 9.5 9.5 9.5 10.0 9.0	MAX 16.0 18.0 17.0 18.0 19.0 18.5 18.5 18.5	MIN 11.5 13.5 14.5 14.5 15.0 14.5 14.5 14.5	MAX 19.5 20.0 20.5 20.5 20.0 20.0 19.5 19.5 20.0 20.5	MIN  14.0 14.0 15.0 15.0 14.5 14.5 14.5 13.5 15.0	19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0	MIN 15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.5
1 2 3 4 5 6 7 8 9 10	MAX 6.5 8.0 7.0 8.0 9.0 8.5 8.0 9.0 8.0	M1N 1.5 4.0 4.0 3.5 5.0 5.0 5.0 4.5 5.5	MAX 11.0 11.5 11.5 11.0 10.5 10.0 9.5 11.5 10.5	MIN 6.55 8.00 8.00 6.00 6.00 6.50	MAX 13.5 13.5 14.0 12.0 14.5 14.5 14.5 14.0 12.0 13.0	9.0 9.0 9.5 9.5 9.5 9.0 9.5 9.0 9.0	MAX 16.0 18.0 17.0 18.0 19.0 18.5 18.5 18.5 19.0 20.0	MIN 11.5 13.5 14.5 14.5 15.0 15.0 14.5 14.5 14.5 14.5	MAX 19.5 20.0 20.5 20.5 20.0 20.0 20.0 20.0 20	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5 14.5 15.0 15.5 16.0	MAX 19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0	MIN 15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.0
1 2 3 4 5 6 7 8 9 10	6.5 8.0 7.0 9.0 8.5 8.0 8.0 9.0	M1N 1.5 4.0 4.0 5.0 5.0 5.0 4.5 5.5 5.0	11.9 11.5 11.5 11.0 10.5 10.0 9.5 11.5 10.5	MIN 6.5 8.0 6.0 6.0 6.0 6.5 6.0 7.0	MAX 13.5 13.5 14.0 12.0 14.5 14.5 14.0 12.0 13.0	9.0 9.0 9.5 9.5 9.0 9.5 9.0 9.0 9.0	MAX 16.0 18.0 17.0 18.0 19.0 18.5 18.5 18.5 19.0 20.0	MIN 11.5 13.5 14.5 14.5 15.0 15.0 14.5 15.0 14.5 15.0	MAX 19.5 20.0 20.5 20.5 20.0 20.0 19.5 20.0 20.5 20.0 20.5	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5 14.5 15.0 15.6	MAX 19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0	MIN 15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.5 15.0 15.0
1 2 3 4 5 6 7 8 9 10	MAX 6.5 8.0 7.0 8.0 9.0 8.5 8.0 9.0 8.0	M1N 1.5 4.0 4.0 3.5 5.0 5.0 5.0 4.5 5.5	MAX 11.0 11.5 11.0 10.5 10.0 9.5 11.5 10.5 9.5 12.0	6.5 6.5 8.0 6.0 6.0 6.0 6.0 5.0 6.0 7.0	MAX 13.5 13.5 14.0 12.0 14.5 14.5 14.5 14.0 12.0 13.0	9.0 9.0 9.5 9.5 9.5 9.0 9.5 9.0 9.5 9.0 9.5	MAX 16.0 18.0 17.0 18.0 19.0 18.5 18.0 19.0 18.5 19.0 20.5 20.5	MIN  11.5 13.5 14.5 14.5 15.0 15.0 14.5 15.0 14.5 15.0 14.0	MAX 19.5 20.0 20.5 20.5 20.0 20.0 20.0 20.0 20	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5	MAX  19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 15.5	MIN  15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.0 15.0 15.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	6.5 8.0 7.0 8.0 9.0 8.5 8.0 8.0 8.0 7.0	H1N  1.5 4.0 4.0 3.5 5.0 5.0 4.5 5.0 4.0 4.5 5.2 2.0	11.9 11.5 11.5 11.0 10.5 10.0 10.0 9.5 10.5 10.5	6.5 6.5 8.0 6.0 6.0 6.0 6.5 5.5 6.0	MAX  13.5 13.5 14.0 14.0 12.0 14.5 14.5 14.0 13.0 13.0 13.0 13.0 13.0	9.0 9.0 9.5 9.5 9.0 9.5 10.0 9.0 9.0 9.0 9.5	16.0 18.0 17.0 18.0 19.0 18.5 19.0 20.0 20.5 20.5 21.0	MIN  11.5 13.5 14.5 14.5 15.0 15.0 14.5 15.5 16.0 14.0 14.5 15.5 16.0 17.0	19.5 20.0 20.5 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.5	MIN 14.0 15.0 15.0 14.5 14.5 14.5 14.5 15.0 15.0 16.0 16.0 16.0 14.5 17.0	19.0 19.0 19.0 17.0 16.5 18.5 20.0 19.5 20.0 19.5 18.5 15.5	MIN 15.0 15.0 15.0 14.5 13.5 13.5 15.5 15.5 15.5 15.0 15.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	6.5 8.0 7.0 8.0 9.0 8.5 8.0 9.0 8.0 9.0	M1N  1.5 4.0 3.5 5.0 5.0 5.0 5.0 4.5 5.5 5.0 4.5 2.0	11.0 11.5 11.5 11.0 10.0 10.0 9.5 10.5 9.5 12.0 12.0	6.5 6.5 8.0 6.0 6.0 6.0 6.5 6.0 7.0	13.5 13.5 14.0 14.0 12.0 14.5 14.5 14.0 13.0 13.0 13.0 13.0 13.5	9.0 9.0 9.5 9.5 9.5 9.5 10.0 9.0 9.0 9.0 9.0 9.5	16.0 18.0 17.0 18.0 19.0 19.0 19.0 20.5 20.5 21.0	HIN 11.5 13.5 14.5 14.5 15.0 14.5 14.5 14.0 14.0 14.0 14.5 16.0 16.0	19.5 20.0 20.5 20.5 20.0 20.0 20.0 20.0 20	MIN 14.0 15.0 15.0 15.0 14.5 14.5 14.5 15.0 15.5 16.0 16.0 14.5 17.0	19.0 19.0 19.0 17.0 16.5 20.0 19.5 20.0 19.5 18.5 15.5 15.5	MIN 15.0 15.0 16.5 13.5 13.5 13.5 15.0 15.5 15.0 15.0 15.0 15.0 15.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	6.5 8.0 9.0 8.5 8.0 8.0 9.0 8.0 9.0	H1N  1.5 4.0 3.5 5.0 5.0 5.0 5.0 5.0 4.0 5.5 5.0 4.0 4.5	11.0 11.5 11.5 11.5 11.0 10.5 10.0 10.0	6.5 6.5 8.0 6.0 6.0 5.0 6.5 6.5 6.5 7.0	13.5 13.5 14.0 14.0 12.0 14.5 14.5 14.0 12.0 13.0 12.0 13.0 11.5 13.5	9.0 9.0 9.5 9.5 9.5 10.0 9.0 9.0 9.0 8.5 9.5	16.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 20.5 21.0	HIN 11.5 13.5 14.5 14.5 15.0 15.0 14.5 14.5 15.0 14.5 16.0 17.0	19.5 20.0 20.5 20.5 20.0 20.0 19.5 20.0 20.0 20.5 21.0 20.5 22.0 23.0	HIN 14.0 15.0 15.0 15.0 14.5 14.5 14.5 13.5 14.5 15.0 16.0 16.0 16.0 16.0 17.0 17.0	19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 15.5	MIN 15.0 15.0 15.0 14.5 13.5 15.0 15.5 15.0 15.0 15.0 10.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	6.5 8.0 9.0 8.5 8.0 8.0 9.0 8.0 7.0 6.0 6.5 8.0	H1N  1.5 4.0 3.5 5.0 5.0 4.5 5.0 4.5 5.0 4.5 5.0 4.5 5.0	11.9 11.5 11.5 11.0 10.5 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0	6.5 6.5 8.0 6.0 6.0 6.0 6.5 6.0 7.0 8.0 8.0	MAX 13.5 13.5 14.0 14.0 12.0 14.5 14.5 14.0 13.0 13.0 13.0 13.0 13.0 15.5 16.6 16.6	9.0 9.0 9.5 9.5 9.5 9.5 10.0 9.0 9.0 9.0 8.5 9.5 9.5	16.0 18.0 17.0 18.0 19.0 19.0 19.0 19.0 20.0 20.5 21.0 20.5 21.0 23.0 24.0	HIN 11.5 13.5 14.5 14.5 15.0 15.0 14.5 15.0 14.5 15.0 14.5 15.0 16.0 17.0	19.5 20.0 20.5 20.5 20.0 20.0 20.0 20.0 20	HIN 14.0 15.0 15.0 15.0 14.5 14.5 14.5 13.5 14.5 15.0 16.0 16.0 16.0 16.0 16.0 16.0 16.0 16.5 17.0	19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 15.5 15.5	MIN 15.0 15.0 15.0 14.5 13.5 15.5 15.5 15.0 15.5 15.0 11.5 10.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	6.5 8.0 7.0 8.0 9.0 8.5 8.0 8.0 8.0 7.0 5.0 6.0 6.0 6.0	M1N  1.5 4.0 3.5 5.0 5.0 5.0 5.0 5.0 6.5 5.5 4.5 6.0 4.5 6.0 4.5 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	11.0 11.5 11.5 11.0 10.5 10.0 9.5 11.5 10.0 9.5 11.5 10.5	6.5 6.0 8.0 6.0 6.0 6.5 6.0 7.0 8.0	13.5 13.5 14.0 14.0 12.0 14.5 14.5 13.0 13.0 13.0 13.0 13.0 12.0 12.0 12.0 16.5	9.0 9.0 9.5 9.5 9.5 9.5 10.0 9.0 9.0 8.5 9.5	16.0 18.0 17.0 18.0 19.0 18.5 18.5 19.0 20.5 20.5 20.5 21.0 20.5 21.0 23.0	HIN 11.5 13.5 14.5 14.5 15.0 14.5 15.0 14.5 15.5 16.0 17.0	19.5 20.0 20.5 20.5 20.0 20.0 19.5 20.0 20.0 20.5 21.0 20.5 22.0 23.0	HIN 14.0 15.0 15.0 15.0 14.5 14.5 14.5 13.5 14.5 15.0 16.0 16.0 16.0 16.0 17.0 17.0	19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 18.5 15.5 15.5	HIN 15.0 15.0 15.0 14.5 13.5 15.0 15.5 15.0 15.5 15.0 15.0 10.5 10.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	6.5 8.0 7.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 6.0 6.0 6.5	H1N  1.5 4.0 3.5 5.0 5.0 4.5 5.0 4.5 5.0 4.5 5.0 4.5 5.0	11.9 11.5 11.5 11.0 10.5 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0	6.5 6.5 8.0 6.0 6.0 6.0 6.5 6.0 7.0 8.0 8.0	MAX 13.5 13.5 14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.6 15.6 16.5	9.0 9.0 9.5 9.5 9.5 9.5 10.0 9.0 9.0 9.0 8.5 9.5 9.5	16.0 18.0 17.0 18.0 19.0 18.5 18.5 18.5 19.0 20.0 20.5 21.0 20.5 21.0 23.5	NIN 11.5 13.5 14.5 14.5 15.0 14.5 14.5 15.0 14.0 14.0 14.0 14.0 17.0 16.0 17.0 16.0 17.0 16.0 17.0	19.5 20.0 20.5 20.5 20.0 20.5 20.0 20.0 20	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5 14.5 15.0 15.5 16.0 16.5 17.0 17.0 18.5 19.5 19.5	MAX 19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 16.0 17.0 16.5 14.5	MIN 15.0 15.0 15.0 14.5 13.5 15.5 15.5 15.0 15.5 15.0 11.5 10.5 10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 18 20 20 20 20 20 20 20 20 20 20 20 20 20	6.5 8.0 7.0 9.0 8.5 8.0 9.0 8.0 9.0 6.0 6.5 8.0	M1N  1.5 4.0 4.0 3.5 5.0 5.0 5.0 4.5 5.5 5.0 4.5 4.5 4.5 4.5 4.5	11.9 11.5 11.5 11.0 10.5 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0 13.5 13.5 12.0 12.0 13.5 13.5 13.5 13.5 13.5 13.5 13.5 13.5	6.5 6.5 8.0 6.0 6.0 6.0 6.0 5.0 6.0 7.0 8.5 7.0	MAX 13.5 13.5 14.0 14.0 12.0 14.5 14.5 14.5 14.5 14.5 15.6 16.5 16.5 16.5 16.5	9.0 9.0 9.5 9.0 9.5 9.0 9.0 9.0 9.0 8.5 9.5 11.0 12.0 13.0	MAX 16.0 18.0 17.0 18.0 19.0 18.5 18.5 18.0 20.0 20.5 21.0 23.0 23.0 23.5 22.0	NIN 11.5 13.5 14.5 14.5 15.0 14.5 14.5 14.5 15.5 16.0 17.0 16.5 15.5 16.0 17.0	MAX  19.5 20.0 20.5 20.5 20.0 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.5	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5 14.5 15.0 15.5 16.0 16.5 17.0 17.0 18.5 19.5 19.5 19.5 19.5 19.5 19.5 19.5 19	MAX 19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 16.0 17.0 16.5 14.5	MIN  15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 5 6 7 7 8 8 9 10 11 12 12 14 15 16 17 18 19 20 21 22 23	6.5 8.0 7.0 9.0 8.5 8.0 9.0 8.0 9.0 8.0 9.0 6.0 6.5 8.0	M1N 1.5 4.0 4.0 5.0 5.0 5.0 5.0 5.0 4.0 4.5 4.5 4.5 4.5 4.5 4.0 4.5 4.5 4.5 4.5 4.0 4.5 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	11.9 11.5 11.0 10.5 10.0 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	6.5 8.0 6.0 6.0 6.5 6.5 6.5 7.0 8.5 7.0 8.5 7.0 8.5 8.5	MAX 13.5 13.5 14.0 14.0 14.0 14.5 14.5 14.5 14.5 15.6 16.5 16.5 16.5 16.5 16.5	9:0 9:0 9:5 9:5 9:5 9:0 9:0 9:0 9:0 8:5 9:0 11.5 12.0 12.0 12.0 13.0 11.5	MAX 16.0 18.0 18.0 17.0 18.0 19.0 18.5 18.5 18.5 20.5 21.0 24.0 23.5 21.0 24.0 21.0	NIN 11.5 13.5 14.5 14.5 14.5 15.0 14.5 15.5 16.0 17.0 18.5 18.0 18.0	MAX  19.5 20.0 20.5 20.0 20.5 20.0 20.0 20.5 20.0 20.5 20.0 20.5 20.5	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5 15.0 16.0 16.5 17.0 18.5 19.0 18.0 17.0 17.0	19.0 19.0 19.0 17.0 16.5 18.5 20.5 20.5 19.5 19.5 19.5 19.5 19.5 19.5 19.5 19	MIN 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.0 15.0 11.5 10.5 10.5 10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 18 20 20 20 20 20 20 20 20 20 20 20 20 20	6.5 8.0 7.0 9.0 8.5 8.0 9.0 8.0 9.0 6.0 6.5 8.0	M1N  1.5 4.0 4.0 3.5 5.0 5.0 5.0 4.5 5.5 5.0 4.5 4.5 4.5 4.5 4.5	11.9 11.5 11.5 11.0 10.5 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0 13.5 13.5 12.0 12.0 13.5 13.5 13.5 13.5 13.5 13.5 13.5 13.5	6.5 6.5 8.0 6.0 6.0 6.0 6.0 5.0 6.0 7.0 8.5 7.0 8.5 7.0	MAX 13.5 13.5 14.0 14.0 14.0 12.0 14.5 14.5 14.5 14.5 15.5 16.5 16.5 16.5 16.5	9.0 9.0 9.5 9.0 9.5 9.0 9.0 9.0 9.0 8.5 9.5 11.0 12.0 13.0	MAX 16.0 18.0 17.0 18.0 19.0 18.5 18.5 18.0 20.0 20.5 21.0 23.0 23.5 22.0 23.5 22.0 21.0 21.0	MIN 11.5 13.5 14.5 14.5 15.0 15.0 14.5 16.0 17.0 16.5 15.5 16.0 17.0 16.5 15.5 16.5 16.5 17.0 18.5 18.5 18.5 18.5 18.5 18.5 18.5 18.5	19.5 20.0 20.5 20.5 20.0 20.5 20.0 20.0 20	MIN 14.0 14.0 15.0 15.0 15.0 14.5 14.5 14.5 15.0 16.5 17.0 17.0 18.5 19.5 19.5 19.5 19.5 19.5 19.5 19.5 19	MAX 19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 16.0 17.0 16.5 14.5	MIN  15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 4 5 5 6 6 7 8 9 10 11 12 13 13 14 15 16 16 17 18 19 20 21 22 23 24 25	6.5 8.0 7.0 8.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 6.5 8.0 8.0 6.5 8.0	M1N  1.5 4.0 4.0 3.5 5.0 5.0 5.0 5.0 4.5 4.5 4.5 4.5 4.5 4.5 4.6 6.0	11.9 11.5 11.5 11.0 10.5 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0 13.5 13.0 13.0 13.0 13.0	6.5 6.5 8.0 6.0 6.0 6.0 6.0 6.0 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX  13.5 13.5 14.0 14.0 14.0 12.0 14.5 14.5 14.5 14.5 15.5 16.0 16.5 16.5 16.5 16.5 16.6 16.0	9.0 9.0 9.5 9.5 9.0 9.5 9.0 9.0 9.0 9.0 8.5 9.5 11.0 12.0 12.0 12.0 12.0 12.0	MAX 16.0 18.0 18.0 17.0 18.0 19.0 18.5 18.0 19.0 20.0 20.5 21.0 23.0 23.5 22.0 23.5 22.0 21.0 21.0	NIN 11.5 13.5 14.5 14.5 15.0 14.5 14.5 14.0 14.0 14.0 14.0 17.0 16.0 17.0 16.5 16.0 17.0 18.5 15.5 16.5 17.0 18.5 18.5 18.5 19.5 19.5 19.5 19.5 19.5 19.5 19.5 19	MAX  19.5 20.0 20.5 20.5 20.0 20.0 20.5 20.0 20.5 20.0 20.5 20.5	MIN 14.0 14.0 15.0 15.0 15.0 14.5 14.5 14.5 15.0 16.5 17.0 17.0 18.5 19.5 19.5 19.5 19.6 17.0 17.0 17.0 17.0 17.0 16.5	MAX 19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 16.5 14.5 15.5 15.5 16.5 16.5 16.5 16.5 16.5	MIN  15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 3 24 5 26	6.5 8.0 7.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 6.0 6.5 8.0 9.0	M1N 1.5 4.0 4.0 5.0 5.0 5.0 5.0 5.0 5.0 4.0 5.0 4.5 5.0 4.5 5.0 4.5 5.0 4.5 5.0 4.5 5.0 4.5 5.0 4.5 6.0 4.0 5.0 4.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	11.9 11.5 11.0 10.5 10.0 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	6.5 8.0 6.0 6.0 6.0 6.5 6.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0	MAX  13.5 13.5 14.0 14.0 14.0 14.5 14.5 14.5 14.6 13.0 13.0 13.0 13.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	9.0 9.0 9.5 9.5 9.0 9.5 9.0 9.0 9.0 9.0 8.5 9.5 11.5 12.0 12.0 12.0	MAX 16.0 18.0 18.0 17.0 18.0 19.0 18.5 18.5 18.5 20.0 20.5 21.0 24.0 23.0 24.0 21.0 21.0 21.0 21.0 20.5	NIN 11.5 13.5 14.5 14.5 14.5 15.0 14.5 15.0 14.0 14.5 15.5 16.0 17.0 18.0 18.0 17.0 18.0 15.0 15.0 15.0 15.0 15.0	MAX  19.5 20.0 20.5 20.0 20.5 20.0 20.0 20.5 20.0 20.5 20.0 20.5 20.5	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5 15.0 16.0 16.5 17.0 18.5 19.0 17.0 17.0 17.0 16.0 16.5 16.5	19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 15.5 15.5 15.5 15.5 16.0 16.0 16.5 16.0 16.5 16.0 16.5	MIN 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.0 15.0 15.0 11.5 10.5 10
1 2 3 4 4 5 5 6 6 7 8 9 10 11 12 13 13 14 15 16 16 17 18 19 20 21 22 23 24 25	6.5 8.0 7.0 9.0 8.5 8.0 9.0 8.0 7.0 6.0 6.5 8.0 8.0	M1N  1.5 4.0 4.0 3.5 5.0 5.0 5.0 4.5 5.5 5.0 4.5 4.5 4.5 4.5 4.5 4.6 4.6 4.7 4.7 4.7 4.7 4.7 4.7 4.7 4.7 4.7 4.7	11.9 11.5 11.5 11.0 10.5 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0 13.5 13.0 13.0 13.0 13.0 13.0 13.0 13.0	6.5 6.5 8.0 6.0 6.0 6.0 6.0 6.5 6.0 7.0 8.5 7.0 8.5 7.0 8.5 8.5 8.5 8.0 8.0	MAX  13.5 14.0 14.0 14.5 14.5 14.5 14.6 13.0 13.0 13.0 13.0 13.0 14.5 16.5 16.5 16.5 16.5 16.5 16.5 16.6 16.0 16.0 14.5	9.0 9.0 9.5 9.5 9.0 9.5 9.0 9.0 9.0 8.5 9.5 11.0 12.0 12.0 12.0 12.0 12.0	MAX 16.0 18.0 17.0 18.0 19.0 18.5 18.5 19.0 20.5 21.0 23.0 23.5 22.0 23.5 22.0 21.0 21.0 21.0 21.0 21.0 21.0	MIN 11.5 13.5 14.5 14.5 15.0 14.5 14.5 14.0 14.0 14.0 14.0 17.0 16.0 17.0 16.5 15.5 16.0 17.0 18.5 15.5 16.0 17.0	MAX  19.5 20.0 20.5 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.0 20.5 20.5	MIN 14.0 14.0 15.0 15.0 15.0 14.5 14.5 14.5 15.0 16.5 17.0 17.0 18.5 19.5 19.5 19.6 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 16.0 17.0 16.5 14.5 15.5 16.5 16.5 16.5 16.5 16.5 16.5 16	MIN  15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 4 5 6 6 7 7 8 9 10 11 12 3 14 5 16 17 18 19 20 21 22 23 22 5 26 7 28 8 29	6.5 8.0 9.0 8.5 8.0 8.0 8.0 9.0 5.0 6.0 6.0 9.0 6.5 8.0 9.0	M1N 1.5 4.0 4.0 5.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	11.9 11.5 11.0 10.5 10.0 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	6.5 8.0 6.0 6.0 6.0 6.5 6.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0	MAX  13.5 13.5 14.0 14.0 14.0 14.5 14.5 14.5 14.6 13.0 13.0 13.0 13.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	9.0 9.0 9.5 9.5 9.0 9.5 9.0 9.0 9.0 9.0 8.5 9.5 11.0 12.0 12.0 12.0	MAX 16.0 18.0 18.0 17.0 18.0 19.0 19.0 20.5 20.5 21.0 20.5 21.0 23.0 23.5 22.0 21.0 21.0 20.5 21.0 21.0 21.0	NIN 11.5 13.5 14.5 14.5 14.5 15.0 14.5 15.0 14.0 14.5 15.5 16.0 17.0 18.0 18.0 17.0 18.0 15.0 15.0 15.0 15.0 15.0	MAX  19.5 20.0 20.5 20.0 20.5 20.0 20.0 20.5 20.0 20.5 20.0 20.5 20.5	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5 15.0 16.0 16.0 17.0 18.5 19.0 18.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17	19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 15.5 15.5 15.5 15.5 16.0 16.0 16.5 16.0 16.5 16.0 16.5	MIN 15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.0 15.0 15.0 15.0 10.5 10.5 10
1 2 3 4 5 6 7 8 8 9 10 11 12 13 4 15 15 16 17 18 19 20 21 22 3 24 5 26 7 28 8 9 30	6.5 8.0 7.0 9.0 8.0 9.0 8.0 9.0 8.0 9.0 6.0 6.5 8.0 9.0 6.5 8.0	M1N 1.5 4.0 4.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 4.0 4.5 4.0 4.5 4.0 4.5 4.0 4.0 5.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4	11.9 11.5 11.0 10.5 10.0 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	6.5 6.5 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX 13.5 13.5 14.0 14.0 14.0 14.5 14.5 14.5 14.5 15.6 16.6 16.5 16.5 16.5 16.5 16.5 16	9:0 9:0 9:5 9:5 9:0 9:5 9:0 9:0 9:0 9:0 11:5 12:0 13:0 12:0 12:0 12:0 12:0 11:0	MAX 16.0 18.0 18.0 17.0 18.0 19.0 18.5 18.5 18.5 19.0 20.5 21.0 23.0 24.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	NIN 11.5 13.5 14.5 14.5 14.5 15.0 14.5 15.0 14.0 14.5 15.5 16.0 17.0 18.5 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX  19.5 20.0 20.5 20.5 20.0 20.5 20.0 20.5 20.5	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5 15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 18.0 18.0	19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 15.5 15.5 16.0 16.0 16.5 16.5 16.5 16.5 16.5 16.5 16.5	MIN  15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 4 5 6 6 7 7 8 9 10 11 12 3 14 5 16 17 18 19 20 21 22 23 22 5 26 7 28 8 29	6.5 8.0 9.0 8.5 8.0 8.0 8.0 9.0 5.0 6.0 6.0 9.0 6.5 8.0 9.0	M1N 1.5 4.0 4.0 5.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	11.0 11.5 11.5 11.0 10.0 10.0 9.5 11.5 10.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	6.5 8.0 6.0 6.0 6.0 6.0 6.5 6.5 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 7.0 8.0 8.0 7.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8	MAX  13.5 13.5 14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.5 16.0 16.5 16.5 16.5 16.6 16.0 14.6 14.5 14.5	9.0 9.5 9.5 9.5 9.5 10.0 9.0 9.0 9.0 9.0 9.0 11.5 12.0 12.0 12.0 12.0 12.0	MAX 16.0 18.0 18.0 17.0 18.0 19.0 19.0 20.5 20.5 21.0 20.5 21.0 23.0 23.5 22.0 21.0 21.0 20.5 21.0 21.0 21.0	MIN 11.5 13.5 14.5 14.5 15.0 15.0 14.5 15.5 16.0 17.0 16.5 15.5 16.0 17.0 18.5 15.5 15.5 16.0 17.0 18.5 15.5 16.0 17.0 18.5 15.5 16.5 16.5 16.5 16.5 16.5 16.5 16	19.5 20.0 20.5 20.5 20.5 20.0 20.5 20.0 20.5 20.0 20.5 21.0 20.5 22.0 23.0 23.0 23.0 23.5 22.0 21.5 22.0 23.0 23.5 20.5 20.5 20.5 20.5 20.5 20.5 20.5 20	MIN 14.0 14.0 15.0 15.0 15.0 14.5 14.5 14.5 15.0 16.5 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0	MAX 19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 16.0 17.0 16.5 14.5 15.5 16.5 16.5 16.5 16.5 16.5	MIN  15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.0 15.0 15.0 15.0 15.0 15
1 2 3 4 5 6 7 8 8 9 10 11 12 13 4 15 15 16 17 18 19 20 21 22 3 24 5 26 7 28 8 9 30	6.5 8.0 9.0 8.5 8.0 8.0 8.0 9.0 5.0 6.0 6.0 9.0 6.5 8.0 9.0	M1N 1.5 4.0 4.0 5.0 5.0 5.0 5.0 5.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	11.9 11.5 11.0 10.5 10.0 10.0 9.5 10.5 9.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	6.5 6.5 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	MAX  13.5 13.5 14.0 14.0 14.5 14.5 14.5 14.5 14.5 15.5 16.0 16.5 16.5 16.5 16.6 16.0 14.6 14.5 14.5	9.0 9.5 9.5 9.5 9.5 10.0 9.0 9.0 9.0 9.0 9.0 11.5 12.0 12.0 12.0 12.0 12.0	MAX 16.0 18.0 18.0 17.0 18.0 19.0 18.5 18.5 18.5 19.0 20.5 21.0 23.0 24.0 24.0 21.0 21.0 21.0 21.0 21.0 21.0 21.0	NIN 11.5 13.5 14.5 14.5 14.5 15.0 14.5 15.0 14.0 14.5 15.5 16.0 17.0 18.5 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0	MAX  19.5 20.0 20.5 20.5 20.0 20.5 20.0 20.5 20.5	MIN 14.0 14.0 15.0 15.0 14.5 14.5 14.5 15.0 16.0 16.0 16.0 17.0 17.0 17.0 17.0 16.0 16.0 17.0 17.0 18.0 18.0	MAX 19.0 19.0 19.0 17.0 16.5 18.0 19.5 20.0 19.5 20.0 19.5 15.5 15.5 16.0 17.0 16.5 14.5 15.5 16.5 16.5 16.5 16.5 16.5	MIN  15.0 15.0 15.0 14.5 13.5 13.5 15.0 15.5 15.0 15.0 15.0 15.0 15.0 15

#### 10312020 CARSON RIVER NEAR SILVER SPRINGS, NEV. (Irrigation network station)

LOCATION. -- Lat 39°17'35", long 119°15'05", in NE 18E 1 sec. 35, T.17 N., R.24 E., Lyon County, on U.S. Highway 95 at Weeks Bridge, 4.5 miles downstream from gaging station at Fort Churchill and approximately 8.5 miles south of Silver Springs.

DRAINAGE AREA. -- 1,450 sq mi, approximately (at gaging station).

PERIOD OF RECORD. -- Chemical analyses: October 1962 to September 1969 (daily), October 1969 to September 1970 (monthly), Water temperatures: October 1962 to September 1970,

EXTREMES, --1969-70: Specific conductance: Maximum daily, 466 micromhos Dec. 10; minimum daily, 90 micromhos Dec. 27.

Period of record:

ort of of record:

Dissolved solids (1962-69): Maximum, 472 mg/l Nov. 1-13, 1966; minimum, 70 mg/l June 22-30, 1967.

Hardness (1962-69): Maximum, 224 mg/l Aug, 1-31, 1963; minimum, 28 mg/l June 22-30, 1967.

Specific conductance: Maximum daily, 685 micrombos Aug. 17, 1963; minimum daily, 81 micrombos July 3, 1967.

Water temperatures (1962-68): Maximum, 22.0°C July 24, 25, 27, 1968; minimum (1962-67), freezing point on many days during winter periods.

REMARKS .-- Records of discharge given for Carson River near Fort Churchill (station 10312000).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

UAT É	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SID2) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE ICL) (MG/L)
23	1345	245	11.5	22	29	7.3	24	4.1	116	0	48	8.2
01	1000	169	0.0	22	34	7.2	30	3.3	124	0	63	6.9
JAN.	1100	184	0.0	23	28	7.5	26	3.3	114	0	48	8.2
79 79	1415	541	5.5	21	23	5.8	18	2.2	90	0	38	5.7
17 APK.	1100	447	5.5	19	21	5.0	18	2.0	79	0	40	5.7
ZZ	1955	378	8.0	20	24	5.6	22	2.6	94	0	46	6.2
25 JUNE	1230	1460	14.5	16	11	2.7	6.9	1.9	48	0	10	2.0
22 JULY	1030	699	20.0	20	17	4.3	14	2.5	79	0	21	2.5
23 AUG.	1345	13	18.0		49	12	43	4.6	180	0	94	8.8
24 SEPT.	1245	324	22.0		51	13	47	5.0	183	0	102	13
٤١٠	1525	2.2	15.0		54	10	49	4.6	192	0	99	12
				DIS-	-210							
UATE	FLU0- R10E (F) (MG/L)	NITRATE (NU3) (MG/L)	BORDN (b) (ug/l)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM CF CONSTI- TUENTS) (MG/L)	OIS- A SCLVED SOLIDS (TONS PER AC-FT)	PERCENT SUDIUM	SODIUM AD- SORP- TION RATIO	HARD- NESS (CA, MG) (MG/L)	NUN- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
UATE JCT. 23	RIDE (F)	(NU31	(6)	SOLVED SOLIDS (RESI- DUE AT 180 C)	SOLVED SOLIDS (SUM CF CONSTI- TUENTS)	SCLVED SOLIDS ITONS PER		AD- SORP- TION	NESS (CA, MG)	CAR- BONATE HARD- NESS	FIC COND- UCTANCE (MICRO-	
23 UEC. U1	RIDE (F) (MG/L)	(NU3) (MG/L)	(UG/L)	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM CF CONST!- TUENTS) (MG/L)	SCLVED SOLIOS (TONS PER AC-FT)	SODIUM	AD- SORP- TION RATIO	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
JCT. 23 UEC. JAN. US	RIDE (F) (MG/L)	(NU3) (MG/L)	(B) (UG/L)	SOLVED SDLIDS (RESI- DUE AT 180 C) (MG/L)	SOLVED SOLIDS (SUM CF CONSTI- TUENTS) (MG/L)	SCLVED SOLIDS ITONS PER AC-FT)	33	AD- SORP- TION RATIO	NESS (CA,MG) (MG/L)	CAR- BONATE HARD- NESS (MG/L)	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 7.6
JCT. 23 UEC. 01 JAN. 05 Fed.	RIDE (F) (MG/L)	(NU3) (MG/L) •3	(B) (UG/L) 150 160	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 202 234	SOLVED SOLIDS (SUM CF CONSTI- TUENTS) (MG/L)	SCLVED SOLIOS (TONS PER AC-FT) -27	33 35	AD- SORP- TION RATIO	NESS (CA, MG) (MG/L) 102	CAR- BONATE HARD- NESS (MG/L)	FIC COND- UCTANCE (MICRO- MHOS) 309	(UNITS) 7.6 7.4
JCT. 23 UEL. JAN. 05 Fed. U9 MAR.	RIDE (F) (MG/L) -3 -4	(NU3) (MG/L) .3 .1	(B) (UG/L) 150 160	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 202 234 216	SOLVED SOLIDS (SUM CF CONSTI- TUENTS) (MG/L) 200 228 201	SCLVED SOLIDS (TONS PER AC-FT) .27 .32 .29	33 35 35	AD- SORP- TION RATIO	NESS (CA, MG) (MG/L) 102 114 101	CAR- BONATE HARD- NESS (MG/L) 7	FIC COND- UCTANCE (MICRO- MHOS) 309 360	7.6 7.4 7.3
JCT. 23 UEC. JAN. US FEG. U9 MAR. 19 APK.	**RIDE (F) (MG/L) **3 **4 ***5 **3	(NU3) (MG/L) .3 .1 1.1	(B) (UG/L) 150 160 150	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 202 234 216	SOLVED SOLIDS SOLIDS (SUM CF CONSTI- TUENTS) (MG/L) 200 228 201 159	SCLVED SOLIOS (TONS PER AC-FT) .27 .32 .29	33 35 35 32	AD- SURP- TION RATIO 1.0 1.2 1.1	NESS (CA,MG) (MG/L) 102 114 101 82	CAR- BONATE HARD- NESS (MG/L) 7 12 7	FIC COND- UCTANCE (MICRO- MHOS) 309 360 322 247	7.6 7.4 7.3 7.6
JCT. 23 UEC. JCC. JAN. JCC.	**************************************	(NU3) (MG/L) .3 .1 1.1 1.2	(6) (UG/L) 150 160 150 90 140	SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 202 234 216 170 158	SOL VED SOL US SOL US (SUM CF CONSTI- TUENTS) (MG/L) 200 228 201 159 150	SCLVED SOLIOS (TONS PER AC-FT) -27 -32 -29 -23 -21	33 35 35 32 34	1.0 1.2 1.1	NESS (CA,MG) (MG/L) 102 114 101 82 73	CAR- BONATE HARD- NESS (MG/L) 7 12 7 8	FIC COND- UCTANCE (MICRO- MHOS) 309 360 322 247 227	7.6 7.4 7.3 7.6 7.2
JCT. 23 UEC. JAN. JOS FEd. U9 MAR. 19 APR. 22 MAY 25 JUNE 22	**RIDE (F) (MG/L)  **3  **4  **5  **3  **2  **4	(NU3) (MG/L) -3 -1 1.1 1.2 -0	(b) (UG/L) 153 160 150 90 140 210	SOLVED SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L) 202 234 216 170 158	SOL VED SOL IDS SOL IDS (SUM CF CONSTI- TUENTS) (MG/L) 200 228 201 159 150	SCLVED SOLIOS (TONS PER AC-FT) -27 -32 -29 -23 -21	33 35 35 32 34 36	1.0 1.2 1.1 .9	NESS (CA,MG) (MG/L) 102 114 101 82 73 83	CAR-BONATE HARD-NESS (MG/L)  7 12 7 8	FIC COND- UCTANCE (MICRO- MHOS) 309 360 322 247 227 267	7.6 7.4 7.3 7.6 7.2
JCT. 23  UEL. JAN. 05 FES. U9 MAR. 19 APR. 22 MAY 25 JUNE 22 JUNE 23	**RIDE (F) (MG/L)  **3  **4  **5  **3  **2  **4  **	(NU3) (MG/L) -3 -1 1.1 1.2 -0 -2	(B) (UG/L) 150 160 150 90 140 210	SOLVED SOLVED SOLLIDS (RESIDUE AT 180 C) (MG/L)  202 234 216 170 158 178 82	SOL VED SOL IDS (SUM CF CONSTI- TUENTS) (MG/L) 200 228 201 159 150 173 75	SCLVED SOLIOS (170NS PER AC-FT) .27 .32 .29 .23 .21 .24 .11	33 35 35 32 34 36 27	AD- SURP- TION RATIO 1.0 1.2 1.1 .9 .9	NESS (CA,MG) (MG/L) 102 114 101 82 73 83 38	CAR- BONATE HARD- NESS (MG/L) 7 12 7 8 8	FIC COND- UCTANCE (MICRO- MHOS) 309 360 322 247 227 267	7.6 7.4 7.3 7.6 7.2 7.7
JCT. 23 UEC. JAN. 05 FEB. U9 MAR. 19 APK. 22 MAY 25 JUNE 22	.3 .4 .5 .3 .2 .4	(NU3) (MG/L) -3 -1 1-1 1.2 -0 -2 -6	(B) (UG/L) 150 160 150 90 140 210 90	SOLVED SOLVED SOLLIDS (RESIDUE AT 180 C) (MG/L)  202 234 216 170 158 178 82 135	SOL-VED SOL-IVES (SUM CF CONSTI-CONST	SCLVED SOLIOS (170NS PER AC-FT) .27 .32 .29 .23 .21 .24 .11 .18	33 35 35 32 34 36 27	\$0.00 \$0.00	NESS (CA,MG) (MG/L) 102 114 101 82 73 83 38	CAR- BONATE HARD- NESS (MG/L) 7 12 7 8 8 6 0	COND- UCTANCE (MICRO- MHOS) 309 360 322 247 227 267 109 201	7.6 7.4 7.3 7.6 7.2 7.7 6.5

10312020 CARSON RIVER NEAR SILVER SPRINGS, NEV. -- Continued CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					TOTAL	
DATE	TOTAL PHOS- PHORUS AS PO4 (MG/L)	ORTHO PHOS- PHATE (PO4) (MG/L)	AMMCNIA (NH4) [MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	KJEL- DAHŁ NITRO- GEN (N) (MG/L)	COLOR (PLATI- INUM- COBALT UNITS)
001.						
23	.50	.42	.00	.76	.76	8
DEC.						
01	.63	.19	.05	-27	.31	
JAN. 05						
FEB.	.52	.44	.23	. 53	.71	2
09	.60	.34	.OD	.15	.15	10
MAR.	•00		•00	.15	.15	10
19	.62	.39	•00	1.1	1.1	20
APR.						
22	•58	.46	.04	•22	. 25	20
MAY						
25 JUNE	.76	•40	.00	. 89	• 89	
22	.87	.43	•03	.72	. 74	
JULY	•07	• 43	•03	• 12	• /4	
23	.47	.37	•22	.32	.49	
AUG.					•	
24	•31	•27	.00	.39	.39	
SEPT.						
21	.21	-18	•06	-18	.23	

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1960 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	326	334	335	319	256	256	196	198	144			
2	331	343		329	258	257	202	200	147			
2	333	342	337	322	258	258	217	200	148			
4	337	343	334	265	258	258	216	201	148			
5	336	342	323	266	258	259	212	200	148			
,	336	342	323	200	2,0	2,77		200				
6	337	344	322	267	258	259	212	201	227			
7	337	344	227	265	257	258	204	200	221		~-	
8	338	343	392	265	258	260	193	201	227		~-	
9	338	363	337	266	258	260	194	201	227		~	
1ó	338	343	466	266	258	259	178	201	228			
20												
11	337	347		206	260	259	179	203	226			
12	337	342	336	207	259	260	178	201	227			
13	337	342	356	266	259	258	178	201	228		~~	
14	336	347	335	267	258	256	194	201	227			
15	336	368	268	256	258	243	177	209	227			
15	330	300	200	2 30	2,0	243		207				
16	338	347		257	258	243	147	172	228			
17	339	349	311	258	257	228	178	175	227			
18	339	344	309	218	257	240	148	167	227			
19	338	344	317	218	257	230	178	118	229			
20	338	353	301	235	257	237	153	117	226		~-	
21	337	353	220	232	262	232	179	116	227			
22	343	354	111	179	258	239	178	131	227			
23	336	353	260	183	256	243	179	119	221		~-	
24	336	354	217	179	256	241	179	118	228		~-	
25	337	353		180	256	240	178	120	225			
26	337	354	136	179	256	241	178	121	226			
27	326	354	90	181	258	197	178	122	226			
28	331	354	221	239	258	205	178	224	176			
29	336	354	240	218		196	178	225	178		~-	
30	341	354	278	239		201	178	227	176		~-	
31	335	334	285	235		201						
21	,,,,		-07			-0.						
AVG	336	348	283	240	257	241	183	176	208			
		- 10										

## 10312020 CARSON RIVER NEAR SILVER SPRINGS, NEV.--Continued TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

(ONCE-DATE) MEASUREMENT												
DAY	ОСТ	NOV	DEC	JAN	FE8	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0.0		0.0	1.0	4.0	2.0	5.5	14.0			
2		1.0		0.0	2.0	5.0	6.0	5.0	13.0			
3		1.0		0.0	3.0	4.0	6.0	5.5	14.0			
4		1.5		0.0	2.0	5.0	4.0	6.0	14.0			
5		1.0		0.0	3.0	5.0	7.0	6.0	13.0			
6		1.5		0.0	4.0	4.0	9.0	6.0	14.0			
7		2.0		0.0	5.0	4.0	7.0	5.5	14.0			
8		2.0		1.0	4.0	4.0	7.0	6.0	15.0			
9		1.5		1.0	5.0	5.0	7.0	6.0	14.0			
10	2.0	2.0		1.0	5.0	5.0	7.0	6.0	14.0			
11	2.0	3.0		1.5	4.0	5.0	6.0	6.5	15.0			
12	2.0	2.0		2.0	5.0	6.0	6.0	6.5	15.0			
13	2.0	1.5		2.0	4.0	6.5	7.0	7.0	16.0			
14	2.0	1.5		4.0	5.0	7.0	6.0	8.5	16.0			
15	2.5	2.0		3.0	4.0	6.0	5.0	9.5	17.0			
16		1.5		3.0	3.0	6.0	6.0	12.0	16.0			
17		2.0		3.0	5.0	3.0	5.0	14.0	17.0			
18		3.0		3.5	4.0	5.0	5.5	17.0	17.0			
19		2.0		4.0	5.0	7.0	6.0	14.0	17.0			
20		2.0		5.0	3.0	5.0	5.0	12.0	18.0			
21		2.0		6.0	5.0	7.0	6.0	11.0	18.0			
22		3.0		5.0	4.0	5.5	6.0	12.0	17.0			
23		1.5		5.0	5.0	5.0	5.0	12.0	18.0			
24		2.0	6.0	6.0	5.0	5.0	5.5	13.0	17.0			
25		2.0		5.0	5.0	4.0	5.0	11.0	18.0			
26		2.0	5.0	4.C	5.0	3.0	5.0	12.0	18.0			
27		1.5	6.0	5.0	5.0		4.5	12.0	19.0			
28		3.0	3.0	6.0	4.0	4.0	5.0	12.0	17.0			
29		2.0	0.0	1.5		5.5	5.0	13.0	18.0			
30		2.0	0.0	5.0		5.0	5.0	12.5	19.0			
31			0.0	1.0		4.5						
AVG		1.8		2.6	4.0	5.0	5.7	9.5	16.0			

#### HUMBOLDT RIVER BASIN

## 10335000 HUMBOLDT RIVER NEAR RYE PATCH, NEV. (Irrigation network station)

LOCATION. --Lat 40°28'00", long 118°18'20", in SE\{NE\{\frac{1}{4}}\sec.18, T.30 N., R.33 E., Pershing County, at gaging station 1,000 ft downstream from Rye Patch Dam and 1.5 miles northwest of Rye Patch.

DRAINAGE AREA. -- 16,100 sq mi, approximately.

PERIOD OF RECORD. --Chemical analyses: December 1951 to September 1958, October 1959 to September 1961, May 1962 to September 1969 (daily), October 1969 to September 1970 (monthly). Water temperatures: December 1951 to September 1955, October 1959 to September 1961, May 1962 to September 1970.

EXTREMES. --Period of record (1951-58, 1959-61, 1962-69):
Dissolved solids: Maximum, 2,190 mg/l Sept. 1-5, 1954; minimum, 253 mg/l June 24, 1956.
Hardness: Maximum, 482 mg/l Sept. 1-5, 1954; minimum, 86 mg/l Jan. 25, 1958.
Specific conductance: Maximum daily, 4,010 micromhos Sept. 2, 1954; minimum daily, 384 micromhos June 24, 1956.
Water temperatures: Maximum (1951-54, 1956-58, 1959-61, 1962-68), 25.5°C Sept. 21, 1958; minimum (1951-54, 1956-58, 1959-61, 1962-68), 25.5°C Sept. 21, 1958; minimum (1951-54)

REMARKS .-- Flow completely regulated by Rye Patch Reservoir.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SIO2) (MG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SOOTUM (NA) (MG/L)	PO- TAS- Slum (K) (MG/L)	B1CAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CG3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.												
22 NOV.	1340	133	11.5	37	44	15	125	18	300	В	70	B9
27 DEC.	1200	14	3.5	34	43	15	126		30B	0	79	86
29 FEB.	1130	17	2.2	33	45	15	129	16	308	0	77	94
25 MAR.	1245	13	10.5	33	43	16	133	18	298	0	77	100
25 MAY	0930	161	6.5	34	43	16	133	16	312	0	85	99
21 JUNE	1640	410	12.0	36	42	16	135	16	304	0	В7	101
24 JULY	1700	440	17.0	35	41	15	135	16	301	0	78	106
21 AUG.	1330	694	21.0		40	16	133	16	296	0	76	97
25	1020	218	21.5	35	38	16	135	17	298	0	72	96

## 10335000 HUMBOLDT RIVER NEAR RYE PATCH, NEV. -- Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

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DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORDN (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLICS (SUM OF CONSTI- TUENTS) (MG/L)	DIS- SOLVED SOLIDS (TGNS PER AC-FT)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UN[TS)
UCT.												
22	.9	• 2	490	564	556	.77	58	4.2	172	0	893	8.5
27	• 9	.1	500	562		.76	61	4.2	169	0	906	8.2
DEC.	1.1	•2	570									
FEB.	1.1	• 2	570	566	563	.77	59	4.3	174	0	914	8.3
25	.9	•0	550	604	569	.82	60	4.4	174	0	922	8.3
MAK. 25	٠.6		560	580	581	.79	60	4.4	174	0	923	8.2
MAY	••			200	701	• • • •	00	***	1.4	·	72.3	0.2
21		• 2	580	588	584	-80	6 <b>l</b>	4.5	171	0	950	7.7
JUNE 24	.9	.2	440	598	575	-81	61	4.6	164	0	919	8.2
JULY	• •	••	****	276	,,,	• • • •	01	4.0	104	U	717	0.2
21			260	598		.81	61	4.5	166	0	908	8.0
AUG. 25	1.1	.2	410	590	558	.80	62	4.6	161	a	913	8.1

DATE	TOTAL PHOS- PHORUS AS PO4 (MG/L)	CRTHO PHOS- PHATE (PO4) (MG/L)	AMMDNIA (NH4) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	COLOR (PLAT- INUM- COBALT UNITS)
DCT.						
22	.35	. 24	.00	.86	. 86	12
NOV.						
27 DEC.	.38	•05	.03	.61	.63	
29	•30	.25	.04	.66	. 69	4
FEB.	• 30	•25	•04	.00	.09	•
25	.31	.30	.04	1.5	1.6	8
MAR.						
25	. 36	.35	.00	1.8	1.8	30
MAY 21	.65	.40	•00	•72	.72	
JUNE	•65	.+0	•00	•12	. 12	
24	.35	.24	.04	.54	.57	5
AUG.	•		•••	•	•	•
25	.27	-19	.00	•50	•50	16

## PESTICIDE ANALYSES

DATE	ALDRIN (UG/L)	DDD (UG/L)	DDT (UG/L)	OI- ELDRIN (UG/L)	ENDRIN (UG/L)	HEPTA- CHLOR (UG/L)	HEPTA- CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	2,4-D (UG/L)	SILVEX (UG/L)	2,4,5-T (UG/L)	CHLOR- DANE (UG/L)
OCT.		••			.00	•00	•00	•00	.00	.06	.00	
01	•00	.00	•00	•00	.00	•00	•00	•00				
NOV.	.00	.00	.00	•00	.00	.00	•00	.00	-00	-05	.00	
DEC. 01	.00	.00	•00	•00	.00	•00	.00	.00	•00	.03	• 00	
JAN. 02	.00	.00	.00	.00	•00	.00	-00	.00	•00	.05	.00	
FE8. 02	.00	.00	.00	.00	.00	•00	.00	.00	•00	.05	.00	
MAR. 03	.00	.00	•00	.00	.00	•00	.00	.00	.00	.05	.00	
APR. 01	.00	•00	.00	.00	.00	.00	•00	.00	.00	.05	.00	
MAY Ol	<b>.0</b> 0	.00	.00	•00	.00	.00	.00	• 00	-00	.06	.00	.00
JUNE 01	.00	.00	•00	.00	.00	.00	.00	•00	•00	.04	.00	
JULY	.00	•00	•00	.00	•00	•00	•00	.00	•00	.03	.00	.00
AUG. 31	•00	.00	•00	•00	•00	•00	.00	.00	.00	.01	.00	.00

#### HUMBOLDT RIVER BASIN

## 10335000 HUMBOLDT RIVER NEAR RYE PATCH, NEV.--Continued-

## SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					(ONCE-DAI	LY MEASUR	REMENT)					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1 2	903			924	911				942		940	
2	905			917	917				949		920	
3	899			930	918				948		916	
4	902			927	915				953		916	
5	908			931	915				954		915	
6	904			931	914				951		916	
7	910			932	919						919	900
8	900			932	914	912					917	908
9	900			932	914	927			954		917	915
10	905			931	914	927	960		947		917	918
11	899			932	914	929	959		951		913	913
12	900			933	915	930	956		948		917	914
13	903			931	912	930	960		943		914	916
14	904			929	912	933	963		945		913	914
15	900			932	913	930	964		946		916	921
16	894			932	916	922	964		946		915	917
17	899			932	916	936	964		947		912	914
18	893			932	914	939	961		942	928	909	913
19	899			923	913	939	967		943	933	911	912
20	902			927	915	940	967		945	935	913	912
21	904			926	939	940	971		947	926	912	907
22	8 <b>99</b>			929	922	932	967		943	930	912	895
23	898			932	921	936	965		945	931	918	921
24	897			921	923	941	971		939	928	914	916
25	902			921	923	944	960		943	933	912	920
26	901			922	921	935	965		942	935	910	924
27	905			922	922	935	962		945	925	911	920
28	905			923	918	936	965		947	923	909	920
29	907			923		945	963		937	925	910	918
30	909			922		923	960		952	926	910	918
31	905			922		927				923	910	
AVG	901			927	917	932			946		914	914

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.3			9.0	5.0				15.0		20.5	
2	15.5			9.0	5.0				15.0		20.5	
3	15.5			8.0	5 • C				15.0		20.5	
4	15.5			8.0	5.0				15.0		21.0	
5	15.0			7.C	6.0				15.0		21.0	
6	15.0			7.0	6.0				15.0		21.0	
7	15.0			8.0	6.0				15.0		21.9	19.0
8	15.0			8.0	6.0	7.0			15.0		20.5	19.0
3	15.0			9.0	6.0	7.0			15.0		20.0	18.5
10	15.0			9.0	7.0	7.0	7.5		15.0		20.0	18.5
11	15.0			9.0	7.0	7.0	7.5		16.0		20.0	18.2
12	15.0			9.0	7.0	7.0	7.5		16.0		21.0	18.0
13	15.0			7.0	7.0	7.0	7.5		16.0		21.0	18.0
14	15.7			7.0	7.0	7.5	7.5		16.0		21.0	17.0
15	15.0			6.0	7.0	7.5	7.5		16.0		21.0	17.0
16	15.0			6.0	7.0	7.5	7.5		16.0		21.0	17.0
17	13.5			6.0	7.0	7.5	8.0		16.0		21.0	17.0
18	13.5			6.C	7.0	7.5	8.0		16.0	20.0	21.0	17.0
19	13.0			6.0	7.0	7.5	8.0		16.0	20.0	21.0	17.0
20	13.0			6.0	7.0	7.0	8.0		16.0	5C-0	21.0	16.5
21	12.5			6.0	7.0	7.0	8.0		17.0	21.0	21.0	16.5
22	12.0			6.9	7.0	7.0	8.0		16.0	21.0	21.0	16.5
23	12.0			6.0	7.C	7.0	8.0		16.0	20.5	21.0	16.5
24	12.C			6.0	7.0	7.0	8.5		16.0	20.5	21.0	16.5
25	11.0			6.0	7.C	7.0	8.5		17.0	20.5	21.0	16.0
26	11.0			5.0	7.0	7.0	8.5		17.0	20.5	21.0	15.0
27	11.0			5.0	7.0	7.0	8.5		17.0	21.0	21.0	15.7
28	11.0			5.C	7.0	6.5	8.5		17.0	21.0	21.0	15.0
29	11.0			5.0		6.5	8.5		17.0	21.0	21.0	15.0
32	11.0			5.0		7.0	8.0		17.0	21.0	21.0	15.9
31	11.0			5.0		7.0	8.0			20.0	21.0	
AVG	13.5			6.7	6.5	7.0	7.9		15.9		20.8	16.8

#### 10336698 THIRD CREEK NEAR CRYSTAL BAY, NEV.

LOCATION. -- Lat 39°14'26", long 119°56'44", in SW\nE\square sec. 22, T.16 N., R.18 E., Washoe County, at gaging station 50 ft upstream from culvert on Lakeshore Boulevard, 600 ft upstream from mouth, and 3 miles east of Crystal Bay.

DRAINAGE AREA. -- 6.0 sq mi.

PERIOD OF RECORD, -- Specific conductance: October 1969 to September 1970 (partial records). Sediment records: October 1969 to September 1970 (partial records).

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	SPECIFIC CONDUCT- ANCE									
OCT			DEC			APR			MAY		
15	1500	74	20	1015	62	02	1300	78	26	1615	29
16	0950	63	20	1400	65	04	1030	75	26	1800	29
17	1055	59	20	1700	60	04	1515	74	JUN		
19	1245	67	21	1030	56	08	1505	84	01	1605	30
19	1645	64	21	1300	56	11	1500	82	02	1800	26
22	0730	68	23	1430	57	15	1420	72	04	1650	29
30	1410	63	JAN			23	1130	70	04	1815	26
NOV			16	0945	52	23	1315	71	07	1725	31
04	1345	71	16	1225	53	23	1535	73	07	1845	29
05	1515	67	21	1000	58	23	1715	75	13	1745	40
05	1700	69	21	1255	58	MAY			24	1100	39
08	1530	60	22	0845	57	02	1610	65	JUL		
09	1145	62	27	1220	68	03	1545	61	06	1625	50
16	1215	63	FEB			03	1750	58	24	1315	71
20	1445	60	27	1645	79	05	1415	55	30	1400	70
23	1615	60	MAR			05	1730	50	AUG		
DEC			12	1445	80	18	1445	37	14	1015	85
02	1150	63	22	1445	72	18	1730	34	25	1420	82
08	0915	62	22	1800	74	18	1900	31	SEP		
08	1430	65	24	1250	80	19	1045	36	11	1435	80
12	1340	62	24	1545	68	23	1430	36	22	1440	80
19	1510	75	24	1800	71	23	1730	31			
19	1730	70	31	1430	78	23	1930	30			

TOTAL SEDIMENT-DISCHARGE MEASUREMENTS AND PARTICLE-SIZE DISTRIBUTION, MATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: 8, BOTTOM MITHDRAMAL TUBE; C, CHEMICALLY DISPERSED; N, IN MATIVE MATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED MATER)

				** '	ILJUAL A				•									
			WATER TEM-			TOTAL					PART	ICLE :	SIZE					METHOD
			PERA-		CONCEN-	SEDIMENT	PERCI	ENT F	INER	THAN	THE S	IZE (	[	LLIME	TERS)	INCL	CATED	OF
			TURE	DISCHARGE	TRATION	DISCHARGE												ANALY-
	DATE	TIME	(°C)	(CFS)	(MG/L)	(TONS/DAY)	<b>.0</b> 02	.004	.008	.016	.031	.062	.125	•250	.500	1.00	2.00	<b>S1</b> S
oc t	15, 1969	1500	5.0	5.0	70	.94	52	71	86	94	96	98	95	99	95	100		SBWC
	16	0950	4.5	7.9	40	.85												
	16	1200	5.0	7.9	50	1.1												
	17	1055	3.0	9.0	21	.51	~-											
	19	1245	5.0	4.8	14	.18	~-											
	.,																	
OCT	19	1645	5.5	5.5	19	.28												
	22	0730	4.0	4.6	6	.07												
BCT	30	1410	9.0	3.9	7	.07												
NOV		1345	9.0	2.3	15	.09							~-					
NUV		1515	4.0	4.6	28	.35												
NUV	5	1700	3.5	4.8	59	.76												
NUV	8	1530	5.0	5.0	10	.14												
NUV	9	1145	4.0	4.8	3	•04												
	16	1215	4.5	4.8	4	.05												
NOV	20	1445	6.5	4.4	3	+04							~-					
			4.5	5.0	10	.14												
	23	1615		3.2	15	.04												
UEC		1150	2.0	3.4	าร์	.10												
DEC		0915	. 5		251	2.6												
ŊFC		1430	2.0	3.9	33	.35												
UEC	12	1340	3.0	3.9	93	•39												
0/6	19	1510	4.0	12	2280	74	50	57	69	87	95	97	99	100				VPWC
	19	1730	3.5	9.0	1270	31												
		1015	3.0	32	367C	317	42	51	66	80	88	92	96	98	100			VPWC
	20		3.5	13	909	32												
	20	1400	4.0	12	357	12												
LEC	20	1700	4.0	•														

SEP 22..... 1440 14.5

1.7 12

#### PYRAMID AND WINNEMUCCA LAKES BASIN

## 10336698 THIRD CREEK NEAR CRYSTAL BAY, NEV .-- Continued

TOTAL SEDIMENT-DISCHARGE MEASUREMENTS AND PARTICLE-SIZE DISTRIBUTION, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHUDS UF AWALYSIS: B, BOTTOM WITHORAWAL TUBE; C, CHERICALLY DISPERSED; N, IM NATIVE WATER; P, PIPET; S, SIEVE: V, VISUAL ACCUMULATION TUBE; N, IN DISTILLED WATER)

			WATER								0.407	ICLE S	176					
			TEM -			TOTAL		<b>_</b>	<b></b>									METHOD
			PERA TURE	DISCHARGE	TRATION							IZE (1						OF ANALY-
	DATE	TIME	(°C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	.008	.016	.031	.062	-125	.250	.500	1.00	2.00	515
DEC	21	1030	4.5	23	1700	106	32	39	4B	61	69	74	82	B7	94	100		<b>VPHO</b>
	23	1300 1430	1.5	33 6.9	2110 40	188 .75												
JAN	16, 1970	0945	1.0	22	1470	87 ' '	14	19	26	32	40	<b>4</b> B	59	68	79	96	100	VPWC
JAN	16	1225	.5	23	1380	86												
JAN	21	1000	1.5	18	2090	102												
	21	1255	2.0 3.0	19	2300	116												
	27	0845 1220	•0	25 10	2430 137	164 3.7												
FEB	27	1645	5.5	7.6	454	9.3												
MAR	12	1445	9.0	5.5	292	4.3												
MAR	22	1445 1800	10.0	10 10	867 756	23 20												
	24	1250	11.0	9.0	380	9.2												
	24	1545	10.0	13	1610	57												
	24	1800	6.0	12	780	25												
	31	1430	7.0	7.2	138	2.7												
APR APR	4	1300 1030	9.5 3.5	6.2 6.2	236 243	4.0 4.1												
APR	4	1515	10.0	6.9	296	5.5												
APR	8	1505	9.5	7.6	365	7.5												
	11	1500 1420	10.0	7.6 9.8	231 448	4.7 12												
	23	1130	4.5	8.5	228	5.2												
	23	1315	4.5	9.2	273	6.B												
	23	1535	8.5	10	749	20												
MAY	23	1715 1610	5.5 14.5	9.B 9.2	494 155	13 3.9												
MAY	3	1545	14.5	10.2	2BB	7.8												
MAY	3	1750	11.5	12	706	23	6	9	12	15	19	23	30	40	56	71	85	SBWC
MAY	5	1415	13.5	12	326	11												
MAY	16	1730	10.5	15 25	1420 1090	5B 74												
MAY	18	1730	10.5	35	2720	257												
MAY	18	1900	8.0	41	1840	204	1	1	2	3	6	9	12	21	45	68	B5	SBWC
MAY	19	1045	4.5	27	1140	83												
	23	1430 1730	12.0	26 37	1690 1620	119 162												
MAY	23	1930	5.5	41	1940	215												
MAY	26	1615	12.0	51	2030	280												
	26	1800	8.5	53	2430	34B	3	4	6	8	10	11	14	23	47	72	89	SBWC
NUL	1 2	1605 1800	9.5	49 68	674 2220	89 40B				7		11	13	20	42			
JUN	4	1650	12.0	59	1440	229									72	65	81	SPWC
JUN	4	1815	10.0	62	1660	278												
JUN	7	1725	13.0	53	1260	180												
	7	1845 1745	10.5	55 27	602 530	89 39	19	21	33	39	47	48	50	53	60	78	100	SPWC
JUN	24	1100	11.0	21	105	6.0											100	3786
JUL	6	1625	16.0	8.5	34	.78												
JUL	30	1315 1400	20.0	3.2 2.7	24 22	.21 .16												
AUG	14	1015	12.0	1.9	35	.18												
AUG	25	1420	20.0	1.9	25	-13												
256	11	1435	18.5	2.1	11	.06												

# 10336700 INCLINE CREEK NEAR CRYSTAL BAY, NEV.

LOCATION.--Lat 39°14'25", long 119°56'38", in SW\u00e4NE\u00e4 sec. 22, T.16 N., R.18 E., Washoe County, at gaging station 500 ft upstream from culvert on Lakeshore Boulevard, 1,000 ft upstream from mouth just downstream from confluence with major tributary, and 3 miles east of Crystal Bay.

DRAINAGE AREA, -- 7.0 sq mi.

PERIOD OF RECORD. -- Specific conductance: October 1969 to September 1970 (partial records). Sediment records: October 1969 to September 1970 (partial records).

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	SPECIFIC CONDUCT- ANCE	DATE	TIME	SPECIFIC CONDUCT~ ANCE	24.55		SPECIFIC CONDUCT-			SPECIFIC CONDUCT-
DAIC	1111	ANCE	DATE	IIME	ANCE	DATE	TIME	ANCE	DATE	TIME	ANCE
OCT			DEC			MAR			MAY		
15	1445	68	19	1715	65	24	1755	80	23	1415	44
16	0945	65	20	0950	53	31	1445	72	23	1715	39
16	1215	67	20	1400	54	APR			23	1915	39
17	1045	66	20	1645	53	02	1245	72	26	1600	39
19	1230	66	21	1015	49	04	1015	69	26	1745	38
19	1645	65	21	1245	49	04	1505	67	JUN		
22	0725	64	23	1415	64	08	1450	80	02	1750	40
30	1400	65	JAN			11	1445	77	04	1640	41
NOV			16	0915	49	15	1430	64	04	1805	40
04	1415	65	16	1210	55	23	1115	67	07	1710	44
05	1500	65	21	0950	54	23	1300	67	13	1710	46
05	1700	66	21	1245	55	23	1525	67	24	1110	50
08	1515	66	22	0830	53	23	1715	65	JUL		
09	1120	65	27	0955	70	MAY			06	1610	53
16	1200	66	27	1100	70	02	1600	56	24	1300	56
20	1500	66	FEB			03	1530	56	30	1345	59
23	1620	65	27	1700	72	03	1730	48	AUG		-
DEC			MAR			05	1430	52	14	1000	71
02	1030	66	12	1430	73	05	1745	45	25	1400	83
08	0900	65	22	1430	72	18	1430	45	SEP		
08	1415	64	22	1750	70	18	1715	40	11	1420	64
12	1330	66	24	1245	74	18	1845	39	22	1445	66
19	1450	99	24	1530	68	19	0905	44			

TOTAL SEDIMENT-DISCHARGE MEASUREMENTS AND PARTICLE-SIZE DISTRIBUTION, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAHAL TUBE; C, CHEMICALLY DISPERSED; N, IM NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

			V, V	ISUAL AC	CUMULATION	IUBE	, w, ,	IN DI	31 TFF	CD WA							
										PART	ICLE :	SIZE					
		WATER			TOTAL												METHOD
		TEM -		CONCEN	SEDIMENT	DEOL	CNT F	INFR	THAN	THE S	12E (	IN MI	LLIME	TERS	INDIC	CATED	0F
		PERA-		CONCEN		FERE			• • • • • • • • • • • • • • • • • • • •								ANALY-
		TURE		EIKALLUN	DISCHARGE (TONS/DAY)		004	000	014	031	062	. 125	. 250	-500	1.00	2.00	SIS
DATE	TIME	( °C)	(CFS)	(MG/L)	TUNS/DAY!	.002	.004	.000	.010	.031	+002	• • • •		****			
						38	47	60	68	75	79	86	95	99	100		SPWC
OCT 15, 196	9 1445	5.0	9.2	328	8.1												
OCT 16	. 0945	5.0	8.0	143	3.1					-							
OCT 16		5.0	7.4	842	17												
DCT 17		3.5	6.5	65	1.1												
OCT 19		5.0	6.1	23	.38												
001 17																	
OCT 19	. 1645	5.0	7.4	113	2.3												
DCT 22		4.0	6.3	17	.29												
		8.5	4.2		.51												•
OCT 30				41	.54												
NUV 4		8.0	4.9		7.3												
NUV 5	. 1500	4.0	6.6	411	1.3												
NUV 5	. 1700	3.5	6.6		4.0				-	-						_	
NOV 8	. 1515	4.5	5.9		1.2												
NOV 9		4.0	5.9	8	.13												_
NOV 16		5.0	5.6	4	.06	,											•
NUV 20		5.0	5.9		2.6			~~									
NOV 20		,,,															
	. 1620	3.5	4.3	17	.20	) ~-											•
NOV 23			4.9		.3												•
OEC 2		2.0			•2											-	-
DEC 8		•5	3.0		.16											_	•
DEC 8		2.0	3.2		-64											-	
DEC 12	1330	3.0	3.0	79	.01	+											

#### 10336700 INCLINE CREEK NEAR CRYSTAL BAY, NEV .-- Continued

TOTAL SEDIMENT-DISCHARGE MEASUREMENTS AND PARTICLE-SIZE DISTRIBUTION, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: 8, BOTTOM WITHDRAMAL TUBE; C, CHEMICALLY DISPERSED; N, IN MATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL ACCUMULATION TUBE: N, IN DISTILLED WATER;

				•••	TOOKE AC			, ",				AI L K						
			WATER TEM -			TOTAL					PART	ICLE S	IZE					METHOD
			PERA- TURE	D. F. C. L. C. C. C.	CONCEN-	SECTMENT	PERCE	NT FI	NER T	HAN T	HE S	IZE (1	IN MIC	LIMET	ERSI	INCIO	CATED	OF
	DATE	TIME	(°C)	DISCHARGE (CFS)	(MG/L)	TISCHARGE (TONS/DAY)	.002	.004	-008	-016	.032	-062	- 125	- 250	- 500	1.00	2.00	ANALY- Sis
DEC	19	1450	4.0	18	6470	314	34	42	52	68	79	86	92	97	99	100		VPMC
DEC	19	1715	3.0	14	1620	61										100		VPWC
DEC	20	0950 1400	3.0	29 22	6460	506	29	32	38	48	58	65	74	83	92	100		VPWC
DEC	20	1645	4.0	18	2240 1320	133 64												
					.,	•											_	
OEC	21	1015	4.5	28	6130	463	14	19	26	32	40	46	53	61	70	83	98	SPWC
DEC	23	1245 1415	1.5	44 6.8	5260 364	625												
	16, 1970	0915	1.5	41	4500	6.7 498	- 5	-8	11	15	20	26	40	60	78	95	100	VPWC
	16	1210	1.0	38	3920	402												
JAN	21	0950	2.0	29	1740	136												
JAN	21	1245	2.0	32	3690	319												
JAN	22	0830	3.0	45	1880	228												
	27	0955 1100	•5 •5	13	117	4.1												
JAN	211	1100	• • •	12	72	2.3												
FEB	27	1700	4.5	10	175	4.7												
	22	1430 1430	8.0 9.5	8.7	412	9.7												
	22	1750	5.0	14 14	382 498	14 19												
MAR	24	1245	8.5	14	286	ií												
мая	24	1530	9.0	18	430	21												
	24	1755	5.5	20	468	21 25												
MAK	31	1445	5.0	12	218	7.1												
APR APR	4	1245 1015	8.0 3.5	12 12	152	4.9												
,	******	1017	,,,	12	110	3.6											_	
APR	4	1505	9.0	14	232	8.8												
APR	8	1450 1445	8.5 9.0	14 14	154 193	5.8												
APR	15	1430	6.0	14	163	7.3												
	23	1115	4.5	10	104	2.8												
ADL	23	1300	6.5	13	427	15												
APK	23	1525	6.5	14	498	19												
APR	23	1715	5.0	14	448	17												
MAY	2	1600	11.5	16	341	15												
MAY	3	1530	13.0	17	432	20												
MAY	3	1730	9.5	21	674	38	8	11	16	21	27	38	53	70	85	99	100	VBWC
MAY	5	1430	12.0	17	330	15												
MAY	5 18	1745 1430	9.5 11.5	25 22	1660	112 18												
MAY	18	1715	10.0	30	1040	84												
MAV	18	1845	9.5	32	622	54												
	19	0905	5.0	23	250	16												
MAY	23	1415	12.0	25	388	26												
	23	1715	11.5	29	696	54												
MAT	23	1915	6.5	27	346	25												
MAY	26	1600	13.5	28	210	16												
	26	1745	12.0	31	814	68												
JUN	4	1750 1640	14.5	25 22	128 88	8.6 5.2												
JUN	4	1805	9.5	23	68	4.2												
JUN	7	1710	10.5	20	37	2.0												
JUN	13	1710	6.5	27	1050	77	45	57	73	82	85	87	87	89	91	94	96	SPWC
JUN	24	1110	11.5	12	100	3.2												
JUL	24	1610 1300	16.0 17.0	8.4 7.3	46 529	1.0 10	34	47	76	93	96	97	98	98	100			SPWC
							34	71	. 0	73	70	71	70	70	100			37#6
JUL	30	1345	16.0	7.6	78	1.6												
	14 25	1000	11.5	5.2 4.9	38 22	•53 •29												
SEP	11	1420	15.5	4.6	53	.66												
SEP	22	1445	11.5	4.9	22	.29												

# 10343500 SAGEHEN CREEK NEAR TRUCKEE, CALIF. (Hydrologic bench-mark station)

LOCATION.--Lat 39°25'54", long 120°14'07", in NE{NE} sec.7, T.18 N., R.16 E., Nevada County, at gaging station on left bank, 2.2 miles upstream from bridge on State Highway 89 and 7.5 miles north of Truckee.

DRAINAGE AREA, -- 10.8 sq mi.

PERIOD OF RECORD. --Chemical analyses: May 1968 to September 1970. Sediment records: May 1968 to September 1970 (partial records).

REMARKS. -- Additional cooperative studies with University of California, Berkeley, Calif., are being conducted.

These include biological sampling of streamed biota and periodic photographic log of stream channel. Data available in district office, Menlo Park, Calif.

DATE	TIME C	HARGE	TEMPER- S ATURE D	XYGEN (	ILICA SID2)	DIS- SI OLVED IRON (FE)	OLVED CAL- CIUM (CA)	( MG )	ODIUM (NA) MG/L)	SIUM E	BICAR- BONATE HCO3) MG/L)	CAR- BONATE (CU3) (MG/L)
JAN. 26	1530	42	2.0		17	40	5.3	2.0	2.3	.7	30	0
MAY 11	1430	39	8.0		20	30	5.6	1.9	2.4	.8	31	0
JUNE 29	1015	14	10.0		24	10	8.4	2.8	3.5	1.1	47	0
SEP. 17	1120	3.3	7.5	9.6		5						
DATE	SULFATE (SD4) (MG/L)	(CL)	910E (F)	NITRD- GEN (N)	TOTAL KJEL- DAHL NITRO- GEN (N) (MG/L)	AMMONIA (NH4)	NITRATE (NO3) (MG/L)	(PO4)	DIS- SOLVEI ORTHO PHOS- PHATE (PO4) (MG/L)	DIS- SOLVEC BORON (B)	CONSTI	D DS DF 
JAN. 26	1.0		.2 .0				• 6	2		- 50	) 4	4
MAY 11	1.0		.4 .0	.36	.36	•00	• 1	2 .32	-11	1 0	) 4	7
JUNE 29	1.0		.2 .1				_			- 60	) 6	.4
SEP. 17				.35	.35	.00	• (	0 .04	.02	2		-
DATE	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARO~ NESS (CA,MG) (MG/L)	NUN- CAR- BONATE	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	PH UNITS)	BIO- CHEM- ICAL OXYGEN DEMAND	DELAYED COLI- FORM (COL- ONIES PER 100 ML)	IMME- DIATE COLI- FORM (COL- ONIES PER 100 ML)	DIS- SOLVED NICKEL (NI) (UG/L)	DIS- SOLVED VANA- DIUM (V) (UG/L)
JAN. 26	• D6	4.99	21	0	18	• 2	7.3					
MAY 11	- 06	4.95	22	0	19	•2	7.3					
JUNE 29	•09	2.42	32	G	18	. 3	7.6					
SEP. 17								.4	26	10	2	6.0
DATE	TIME	DIS- CHAR( (CFS	SE ATURE	AIR TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	E TIM	DIS CHAR ME (CFS	GE ATUR	R- TEMPE	R- ANC	- IC  -   T-   E   RO-
OCT 06	1220	3.	.8 6.0		124	APR						
15 20	1535 1540	10 6.			118 114		162				.0	63 65
27 NOV	1545	4.	4 7.0	6.0	116	MAY 05.	. 153	35 63	. 10	0.0 16	.0	54
03	1530 1635	4. 5.	4 6.0		117 112	11.	083	35 40	. 3	3.0 1	0	56 54
17 DEC	1115	4.		0.0	119	18. 26.	152	25 63	12	2.0 18	.0	52 53
01	1645 1315	4.	0 2.0	3.0	121 121	. JUN					.0	69
15 22	1530 0915	19		9.0		22.	111	15 16	15	5.0 23	.0	77
29	1135	12	0.0	3.0	86	. JUL					.0	78 99
JAN 20 26	1335 1530	29 42	2.0		63 52		. 121				.0	115
FEB 02	1045	26	6.0		60	03.	. 083					118 122
09	1400 1315	16 14	4.0 4.0	7.0	70 75	19.	. 150	0 3	.1 17	7.5 25	.0	123 129
MAR	1515	12			81	31.	073					129
02 09	1315	11	2.0 3.0	4.0	86	07.	. 070	00 3	.4 7			125
16 24 31	1600 1525 1510	16 24 18	5.0 6.0 5.0	15.0	78 72 68	17.	112	20 3	.3 7	7.5		128  129
22	1,10	10	3.0	1.0	06		003	>	., .	0		'

#### 10343500 SAGEHEN CREEK NEAR TRUCKEE, CALIF .-- Continued

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	DATE	TIME	WATER TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	WATER TEM- PERA- TURE (°C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
аст	6, 1969	1220	6.0	3.8	1	.01	FEB 12, 1970	0925	1.0	16	2	•09
OCT	15	1535	16.0	10	11	• 36	FEB 16	1315	4.0	14	4	.15
OCT	20	1540	6.0	6.1	1	• 02	FEB 23	1315	2.0	12	7	.23
OCT	27	1545	7.0	4.4	1	.01	MAR 2	1515	2.0	12	4	•13
	3	1530	6.0	4.4	1	.01	MAR 9	1315	3.0	11	4	•12
NOV	10	1635	4.0	5.4	1	-01	MAR 16	1600	5.0	16	5	.22
NOV	17	1115	2.0	4.6	1	.01	MAR 17	1410	5.0	15	3	.12
DEC	1	1645	2.0	4.0	1	.01	MAR 24	1525	6.0	24	11	•71
DEC	9	1315	2.0	4.0	1	.01	MAR 31	1510	5.0	18	5	•26
DEC	15	1530	3.0	4.4	1	.01	APR 7	1625	6.0	34	10	.95
DEC	22	0915	1.0	19	3	.15	APR 13	1415	10.0	27	7	.53
	29	1135	0.0	12	1	.03	MAY 5	1535	10.0	63	15	2.4
	20, 1970	1335	2.0	29	5	.39	MAY 11	0835	3.0	40	4	.45
	26	1530	2.0	42	4	.50	MAY 11	1345	8.0	39	2	.21
FEB		1045	6.0	26	4	.28	JUL 31	1505	16.0	3.4	1	-01
FEB		1400	4.0	16	3	.13	AUG 13	1530	16.5	3.3	2	.02

# 10345900 TRUCKEE RIVER AT FLORISTON, CALIF. (Irrigation network station)

DRAINAGE AREA. -- 932 sq mi (at gaging station).

PERIOD OF RECORD. -- Chemical analyses: January 1964 to September 1969 (daily), October 1969 to September 1970 (monthly),
Water temperatures: January 1964 to September 1970,

EXTREMES. -- 1969-70:

Specific conductance: Maximum daily, 112 micromhos Dec. 12; minimum daily, 61 micromhos May 25. Water temperatures: Maximum, 19.5°C July 23.

Period of record:

winter periods.

or record:

Dissolved Solids (1964-69): Maximum, 85 mg/l Dec. 1-21, 1964; minimum, 45 mg/l Dec. 22-31, 1964.

Hardness (1964-69): Maximum, 43 mg/l Mar. 1-31, 1964; minimum, 18 mg/l Dec. 22-31, 1964.

Specific conductance (1964-66, 1967-70): Maximum daily, 141 micromhos Feb. 3, 1964; minimum daily, 39 micromhos Dec. 23, 1964

Makimum daily, 1964.

Water temperatures: Maximum, 20.0°C July 24, 1964; minimum (1964-69), freezing point on several days during

REMARKS.--Records of discharge given for Truckee River at Farad, Calif (station 10346000). Chemical-quality samples collected by Sierra Pacific Power Company. Prior to October 1965, published as "at Farad".

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	SILICA (SID2) (MG/L)	D[S- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SDOIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)
DCT.										
22 NOV.	1500	409	10.0	15		8.6	2.8	5.1	1.5	48
25 JAN.	1050	409	4.5	14		9.4	3.0	6.5	1.9	56
05 FEB.	1435	374	1.0	16		9.8	3.1	6.1	1.5	50
LO	1430	2230	5.0	13		8.6	2.5	5.5	1.6	46
18 APR.	1205	2650	5.5	14	0	8.5	2.6	5.6	1.4	44
22 May	1120	658	7.0	18	80	8.8	2.8	4.2	1.2	43
25 JUNE	1100	2270	8.5	16		6.3	1.8	3.2	• 9	32
?2 JULY	1535	975	15.5	16	0	7.0	2.0	3.8	1.2	36
23 AUG.	1605	745	19.5		0	8.8	2.6	5.3	1.6	50
24 SEP.	1545	564	17.0			8.5	2.6	5.3	1.6	44
22	1545	571	13.0			9.0	2.7	6.D	1.5	53

# 1034 590 0 TRUCKEE RIVER AT FLORISTON, CALIF. -- Continued

01S- SOLVED ORTHO PHOS- PHATE (P04) (MG/L) (MG/L)
.03 .03
•04 •D0
.07 .07
.28 .19
•26 •17
.13 .11
.30 .17
.19 .14
.16 .07
.34 .30
.07 .06
- COLOR
(PLAT- E PH INUM COBALT (UNITS) UNITS)
(PLAT- E PH INUM- - COBALT (UNITS) UNITS)
E PH INUM- - COBALT (UNITS) UNITS)
PH (PLAT- PH (NUM- COBALT (UNITS) UNITS) 2 7.5 4 5 7.1 4
E PH INUM (UNITS) UNITS)  2 7.5 4 5 7.1 4 3 7.2 2
E PH INUM-COBALT (UNITS) 2 7.5 4 5 7.1 4 3 7.2 2 0 7.4 2
E PH INUM-COBALT UNITS) 2 7.5 4 5 7.1 4 3 7.2 2 0 7.4 2 1 7.2 10
E PH COBALT INUM-COBALT UNITS)  2 7.5 4 5 7.1 4 3 7.2 2 0 7.4 2 1 7.2 10 6 7.8 10
E PH COBALT INUM-COBALT UNITS)  2 7.5 4 5 7.1 4 3 7.2 2 0 7.4 2 1 7.2 10 6 7.8 10 3 6.7
E PH COBALT INUM-COBALT UNITS)  2 7.5 4 5 7.1 4 3 7.2 2 0 7.4 2 1 7.2 10 6 7.8 10 3 6.7 9 6.8 4
E PH COBALT INUM-COBALT UNITS)  2 7.5 4 5 7.1 4 3 7.2 2 0 7.4 2 1 7.2 10 6 7.8 10 3 6.7

# 10345900 TRUCKEE RIVER AT FLORISTON, CALIF. -- Continued

# SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25°C), WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

					(ONCE-DAI	LY MEASUR	EMENT)					
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	94	99		87	93	97	88	62	86	94	88
2	82	95	106		87	92	92	73	63	88	93	89
3 4	83	96	101		86	94	89	80	64	89	92	89
4	82	95	104		86	94	87	78	64	88	93	89
5	84	97	100	103	93	91	85	76	63	89	93	89
6	81	96	101		92		84	75	62	89	95	89
7	82	97	102		91		84	79	64	88	94	88
8	83	97	102		91	99	89		64	91	92	89
9	82	96			92	97	89	75	75	89	92	98
10	82	96	109	107	91	95	89	74	79	93	92	98
11	83	96	104	107	92	93	89	68	78	93	91	98
12	82	100	112	107	91	92	88	68	77	94	92	99
13	82	100	105	107	91	91	89	68	78	92	91	98
14		100	104	88	91	92	88	67	76	89	95	98
15		100		89	90	92	88	67	76	91	93	99
16		100		90	89	92	80	75	77	89	94	95
17	90	101	102		90		80	64	82	91	94	96
18	90	101	105		90	91	81	66	86	90	94	95
19	90	100	103		91	96	81	67	72	91	94	98
20		100			91	95	82		73	91	94	97
21	95	101			91	98	82		76	93	94	96
22	98	100			92		82	74	75	99	94	9 <b>9</b>
23	94	100			91		82	78	79	104	94	96
24	94	101			92		82	76		94	94	98
25		101			95		102	61	78	90	93	96
26		100			98		93	62	88	90	94	96
27	92	101			92		89	64	84	93	94	96
28	100	100			92		90			94	94	99
29	91	100							88	93	96	96
30	91	101							92	93	95	96
31	91										89	
AVG	87	98			90		86	71	74	91	93	94

# TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (ONCE-DAILY MEASUREMENT)

DAY	OC T	No A	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
,	10.G	8.0	4.5		7.0	4.5	5.5	8.0	9.0	12.0	15.0	15.0
2	10.0	7. 5	3.0		7.0	4.0	5.5	10.0	10.0	12.0	15.0	14.0
3	10.C	8.0	3.0		7.0	3.5	6.0	9.0	9.0	14.0	15.5	14.0
4	.0.0	8.0	3.0		7.0	4.0	6.5	8.0	9.0	15.0	16.0	13.0
5	10.0	P. 5	4.0	1.0	5.0	4.0	8.0	10.0	10.0	15.0	16.5	12.0
6	10.0	5.5	5.0		5.0		8.5	9.0	10.0	15.0	15.5	15.0
7	10.0	5.0	4.0		5.0		7.0	8.0	12.0	16.0	15.0	15.5
5	10.0	5.5	5.0		5.0	4.0	9.0	8.0	10.0	15.0	15.0	15.0
. 9	9.0	5. 5			5.0	4.0	9.0	7.0	14.0	15.0	14.0	15.0
10	9.0	6.0	5.7	4.5	5.5	4.0	9 • C	7.0		16.0	18.0	15.5
11	9.C	5. 5	5.0	5.0	5.5	4.0	9.0	7.0		15.0	17.5	16.0
12	9.0	5.0	5.7	5.0	5.5	4.5	7.0	7.0		15.0	17.0	13.0
13	9.C	5. C	5.0	4.5	5.5	4.5	7.5	7.0		15.0	16.0	14.0
14		5.0	5.0	4.0	4.0	5.5	5.5	8.0		18.0	16.5	13.0
15		5.0		4.0	4.0	5.0	6.0	9.0		18.0	17.0	13.5
16		5.0		4.0	4.0	5.0	6.C	7.0	14.0	14.0	17.0	15.0
17	9.0	4.5	5.0		4.0		5.5	7.0	15.0	14.0	17.5	15.0
18	7.C	5. €	5.0		3.5	5.5	7.0	8.0	15.0	15.0	16.0	16.0
19	7.0	4.5	1.0		4.0	6.0	7.5	8.0	15.0	17.0	17.0	12.0
50		4.5				6.5	7.5	8.0	15.0	17.0		10.0
21	7.5	4.5			4.5	7.0	6.0	8.0	15.0	19.0	16.0	9.5
22	9.0	4.5			4.5		6.0	8.0	15.0	17.0	15.5	10.0
23	8 • C	4.5			4.5		6.5	9.0	15.0	19.5	16.0	10.0
24	8.0	4.5			5.0		6.5	6.0		16.0	16.5	10.0
25		4.5			5.0		7.0	7.0	13.0	17.0	17.0	12.0
26		4.5			5.0		5.0	7.0	10.0	17.0	17.0	12.0
27	8 • C	4. 5			4.0		3.0	8.0	11.0	16.0	17.5	13.0
28	7.5	4.5			5.0		3.0		11.0	16.0	17.0	12.5
29	8.0	4.5							10.0	16.0	16.5	13.0
30	8.5	4. 5							9.0	16.0	15.0	11.5
31	3.0										13.0	
AVG	8.7	5.3			5.0		6.6	7.9	12.0	15.6	16.1	13.1

#### 10351650 TRUCKEE RIVER AT WADSWORTH, NEV.

LOCATION. -- Lat 39°38'19", long 119°16'09", in SW[SW] sec. 34, T.21 N., R.24 E., Washoe County, temperature recorder at gaging station on right bank, 0.2 mile northeast of Wadsworth and 0.5 mile downstream from bridge on U.S. Highway 40.

DRAINAGE AREA, -- 1,719 sq mi.

PERIOD OF RECORD. -- Water temperatures: July 1965 to September 1970.

EXTREMES.--1969-70:
Water temperatures: Maximum, 28.5°C July 20, Aug. 11, 12; minimum, 1.0°C on several days during December and January.

Period of record:
Water temperatures: Maximum, 28.5°C July 20, Aug. 11, 12, 1970; minimum, 1.0°C on several days during December and January of most years.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

		11	EMPERATURE	(°C) UF	WATER, WA	TER YEAR	OCTOBER 1	969 TO SE	PTEMBER 1	910		
DAY	O	CT .	N	οv	DE	C	JA	N.	FE	В	MA	AR.
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1 2	19.C 17.0	15.0 14.0	12.0	10.0	7.0 7.0	5.5 5.5	3.5 3.0	1.5	5.0 4.5	4.0	7.0 6.0	6.0 4.5
3	14.5	11.5	12.0	10.0	6.5	5.5	2.0	1.0	5.5	4.5	6.0	4.0
4	14.0	1C.C	12.0	10.0	6.5	5.5	1.5	1.0	6.5	5 - 5	5.5	5.0
5	14.0	10.0	12.0	10.5	6.5	5.0 5.5	1.0	1.0	6.0	5.5 5.5	6.0 7.0	4.5 5.5
7	14.5	10.5	10.0	9.0	7.0	6.0	1.5	1.0	6.5	5.5	7.0	6.0
8	14.5	12.0	10.5	9.0	7.0	6.5	2.0	1.0	6.5	5.5	6.5	6.0
10	15.0 14.5	11.5 12.0	10.5	8.5 8.5	6.5 7.0	6.0	4.5 5.0	2.0 4.0	6.5	6.0 5.5	6.5	5.5 5.5
11	13.5	10.0	10.5	8.5	8.9	7.0	5.0	4.5	8.0	6.5	6.5	5.5
12	13.5	10.0	11.7	9.0	8.0	8.0	5.0	4.0	8.0	6.5	8.0	5.5
13 14	13.5 12.0	9.5 10.0	11.0	9.0	9.5	8.5 8.0	5.5 6.0	4.5 5.0	6.5	5.0 4.5	10.0	8.0 8.5
15	10.5	9.5	10.0	8.5	8.5	6.0	5.0	3.5	5.5	5.0	9.0	7.0
16	11.0	9.0	10.7	9.0	7.0	5.5	5.0	3.5	6.5	5.C	9.0	6.5
17	10.0	9.0	9.0	8.0	7.0	5.5	5.0	3.5	6.0	4.5	9.0	7.0 5.5
1 A 1 9	10.0 11.5	9.5	8 • 5 8 • 5	6.0 6.0	8.5 8.5	6.5 7.0	4.5 5.0	4.0 4.5	5.0 5.0	4.0 4.0	7.0 6.5	5.0
20	12.0	9.0	3.5	6.0	9.5	8.0	5.0	5.0	5.0	4.0	7.0	5.5
21	13.5	10.0	9.0	7.0	9.0	6.0	6.0	5.0	6.0	4.5	9.5	6.5
2.2	14.5	11.6	9.0	7.0	6.0	4.0	6.0	4 • 5	6.5	5.0	9.0	7.0
23 24	14.5	11.0	8.5 8.5	7.0 6.5	5.5 6.0	4.0 5.0	5.0 5.0	4.5 4.0	6.5	5.5 5.5	10.0	8.C 8.5
25	13.5	11.0	8.5	6.5	5.5	5.0	4.0	3.5	7.0	5.0	10.0	8.5
26	13.0	10.5	8.5	6.5	5.0	4.0	5.0	4.0	7.0	5.5	9.5	8.5
27 28	12.0	10.5 10.5	8 • 5 8 • 0	6.5	4.0 3.5	3.5	5.0 4.5	4.5 3.5	8.0 7.0	6.0 6.5	9.5 10.5	7.0 7.0
29	11.5	9.5	7.0	6.0 5.5	2.0	2.0 1.5	3.5	3.5			9.5	7.C
30	12.0	9.5	6.5	5.5	3.0	1.5	4.5	3.5			8.5	6.0
31	12.0	9.5			2.2	1.0	4.5	4.0			7.0	5.5
AV G	13.2	10.5	9.7	7.9	6.5	5.3	4.1	3.2	6.2	5.1	8.0	6.3
OAY	A	PR	м.	AY	Ji	JN	JI	JL	A	JG	SI	EP
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MEN
1	9.0	5.C	MAX 16.5	MIN 10.5	MAX 21.0	MIN 12.0	MAX 19.0	15.0	25.0	17.0	MAX 23.0	15.5
2	9.0 11.0	5.C 6.5	MAX 16.5 19.5	MIN 10.5 11.5	MAX 21.0 22.0	MIN 12.0 15.0	MAX 19.0 20.0	15.0 18.0	25.0 26.0	17.0	MAX 23.0 22.5	15.5 15.5
2 3 4	9.0	5.C	MAX 16.5	MIN 10.5	MAX 21.0	MIN 12.0 15.0 15.0	MAX 19.0	15.0 18.0 18.5	25.0	17.0	MAX 23.0	15.5 15.5 15.5
2	9.0 11.0 11.5	5.C 6.5 8.5	MAX 16.5 19.5 20.5	MIN 10.5 11.5 12.0	21.7 22.3 21.0	MIN 12.0 15.0	MAX 19.0 20.0 21.0	15.0 18.0	25.0 26.0 26.0	17.0 17.0 18.0	MAX 23.0 22.5 22.5	15.5 15.5
2 3 4 5	9.0 11.0 11.5 12.0 14.0	5.0 6.5 8.9 8.0 8.5	MAX 16.5 19.5 20.5 20.5 20.0	MIN 10.5 11.5 12.0 14.5 14.0	MAX 21.0 22.0 21.0 21.5 20.0	MIN 12.0 15.0 15.0 14.5 14.5	MAX 19.0 20.0 21.0 21.0 21.0 22.0	15.0 18.0 18.5 18.5 19.0	25.0 26.0 26.0 25.5 28.0	17.0 17.0 18.0 19.0 18.5	MAX 23.0 22.5 22.5 18.5 18.0	15.5 15.5 15.5 15.0 12.5
2 3 4 5 6 7	9.0 11.0 11.5 12.0 14.0	5.0 6.5 8.6 8.0 8.5 9.5	MAX 16.5 19.5 20.5 20.5 20.0	MIN  10.5 11.5 12.0 14.5 14.0	MAX 21.7 22.0 21.0 21.5 20.0	MIN 12.0 15.0 15.0 14.5 14.5	MAX 19.0 20.0 21.0 21.0 22.0	15.0 18.0 18.5 18.5 19.0	25.0 26.0 26.0 25.5 28.0 28.0	17.0 17.0 18.0 19.0 18.5	MAX 23.0 22.5 22.5 18.5 18.0 21.0 22.5	15.5 15.5 15.5 15.0 12.5
2 3 4 5	9.0 11.0 11.5 12.0 14.0	5.0 6.5 8.9 8.0 8.5	MAX 16.5 19.5 20.5 20.5 20.0	MIN 10.5 11.5 12.0 14.5 14.0	MAX 21.7 22.3 21.0 21.5 20.0 19.5 21.0 18.0	MIN 12.0 15.0 15.0 14.5 14.5 14.5	19.0 2C.0 21.0 21.c 22.0 22.0 23.0	15.0 18.0 18.5 18.5 19.0	25.0 26.0 26.0 25.5 28.0 28.0 28.0	17.0 17.0 18.0 19.0 18.5 19.5 19.5	23.0 22.5 22.5 18.5 18.0 21.0 22.5 22.5	15.5 15.5 15.5 15.0 12.5 14.5 16.0
2 3 4 5 6 7 8 9	9.0 11.0 11.5 12.0 14.0 13.5 13.0 13.5	5.C 6.5 8.5 8.0 8.5 9.5 10.0 10.5	MAX 16.5 19.5 20.5 20.5 20.0 16.5 18.0 14.5 15.5	MIN 10.5 11.5 12.0 14.5 14.0 13.0 11.0 11.0 10.0 9.5	MAX 21.0 22.0 21.5 20.0 19.5 21.0 18.0 15.0	MIN 12.0 15.0 15.0 14.5 14.5 15.0 14.0 13.5 11.5	MAX 19.0 20.0 21.0 21.0 22.0 22.0 23.0 21.0 20.5	15.0 18.0 18.5 18.5 19.0 19.0 20.5 19.5 19.0 18.5	25.0 26.0 26.0 25.5 28.0 28.0 26.5 28.0 26.5	17.0 17.0 18.0 19.0 19.5 19.5 19.5 18.0 19.0	MAX 23.0 22.5 22.5 18.5 18.0 21.0 22.5 22.5 21.5 22.5	15.5 15.5 15.5 15.0 12.5 14.5 16.0 16.0 15.0
2 3 4 5 6 7 8 9	9.0 11.0 11.5 12.0 14.0 13.5 13.0 13.5 14.0	5.C 6.5 8.5 8.0 8.5 9.5 9.5 1C.0 10.5	MAX 16.5 19.5 20.5 20.5 20.0 16.5 18.0 14.5 15.5	MIN  10.5 11.5 12.0 14.5 14.0 11.0 11.0 11.0 9.5	MAX 21.0 22.0 21.0 21.5 20.0 19.5 21.0 18.0 15.5	MIN  12.0 15.0 15.0 14.5 14.5 14.5 11.0	MAX 19.0 20.0 21.0 21.0 22.0 22.0 23.0 21.0 20.5	15.0 18.0 18.5 18.5 19.0 19.0 20.5 19.0 19.5	25.0 26.0 26.0 25.5 28.0 28.0 26.5 28.0 28.0	17.0 17.0 18.0 19.0 18.5 19.5 19.5 19.0 19.0	MAX 23.0 22.5 22.5 18.5 18.0 21.0 22.5 22.5 22.5 22.5 22.5	15.5 15.5 15.5 15.0 12.5 14.5 16.0 16.0 15.0
2 3 4 5 6 7 8 9 10	9.0 11.0 11.5 12.0 14.0 13.5 13.5 14.0	5.0 6.5 8.5 8.0 8.5 9.5 10.0 10.5 9.5	MAX  16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.5	MIN  10.5 11.5 12.0 14.5 14.0 13.0 11.0 10.0 9.5	MAX 21.0 22.0 21.0 21.5 20.0 19.5 21.0 15.0 15.0	MIN  12.0 15.0 15.0 14.5 14.5 14.0 13.5 11.0 11.0	MAX 19.0 20.0 21.0 21.0 22.0 22.0 22.0 21.0 20.5 24.5 25.5	15.0 18.0 18.5 19.0 19.0 20.5 19.5 19.5	25.0 26.0 26.0 25.5 28.0 28.0 26.5 28.0 28.0 28.0 28.0	17.0 17.0 18.0 19.0 18.5 19.5 18.5 18.0 19.5	MAX 23.0 22.5 22.5 18.5 18.0 21.0 22.5 22.5 21.5 22.5 21.6	15.5 15.5 15.5 15.0 12.5 14.5 16.0 16.0 15.0
2 3 4 5 6 7 8 9 10 11 12 13 14	9.0 11.0 11.5 12.0 14.0 13.5 13.0 13.5 14.0	5.0 6.5 8.0 8.5 9.5 10.0 10.5 9.5 9.5 8.5	MAX  16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 15.5 17.0	MIN  10.5 11.5 12.0 14.5 14.0 13.0 11.0 11.0 10.0 9.5 9.5 9.5 9.5 11.5	MAX 21.9 22.3 21.0 21.5 20.0 19.5 21.0 15.0 15.0 16.5 16.5 16.5	MIN  12.0 15.0 15.0 14.5 14.5 14.5 15.0 13.5 11.5 11.0 12.0 12.0 12.0	MAX 19.0 2C.0 21.0 21.0 22.0 22.0 23.0 21.0 25.5 24.5 25.5 26.0	15.0 18.0 18.5 19.0 19.0 20.5 19.5 19.5 18.0 19.5	25.0 26.0 25.5 28.0 28.0 28.0 26.5 28.0 28.0 28.0 28.0 28.0 28.0 28.0	17.0 17.0 18.0 18.0 18.5 19.5 18.0 19.5 20.0 20.0	MAX  23.0 22.5 22.5 18.5 18.0  21.0 22.5 22.5 21.5 21.5 21.5 21.7 21.5	15.5 15.5 15.5 15.0 12.5 14.5 16.0 15.0 15.0 15.0
2 3 4 5 6 7 8 9 10 11 12 13 14	9.0 11.5 12.0 14.0 13.5 13.5 13.6 13.5 14.6	5.C 6.5 8.G 8.G 9.5 1C.C 1C.S 9.5 9.5 9.5 7.C	MAX  16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 20.5	MIN 10.5 11.5 12.0 14.5 14.0 11.0 11.0 11.0 9.5 9.5 9.0 10.5 11.5	MAX 21.0 22.0 21.5 20.0 19.5 21.0 15.0 15.5 16.5 16.5 16.5 16.5	MIN 12.0 15.0 15.0 14.5 14.5 14.5 11.0 11.0 12.0 12.0 12.0	19.0 20.0 21.0 21.0 22.0 22.0 23.0 21.0 20.5 24.5 25.5 26.0 27.0	15.0 18.5 18.5 19.0 19.0 20.5 19.5 19.5 19.5 19.5	25.0 26.0 26.0 25.5 28.0 28.0 26.5 28.0 28.0 28.5 28.0 27.0	17.0 17.0 18.0 19.0 18.5 19.5 18.0 19.5 20.0 20.0 19.5	23.0 22.5 22.5 18.5 18.0 21.0 22.5 22.5 22.5 21.5 22.5 21.5 21.5 22.5 21.5 21	15.5 15.5 15.5 15.0 12.5 14.5 16.0 16.0 15.0 15.0 15.5 15.0 12.5
2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.0 11.5 11.5 12.0 14.0 13.5 13.0 13.5 14.0 13.5 11.0 10.0	5.C 6.5 8.6 8.6 8.5 9.5 10.0 10.5 9.5 8.5 7.0 8.6	16.5 19.5 20.5 20.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 15.5 17.0 19.0 20.5	MIN 10.5 11.5 12.0 14.5 14.0 11.0 11.0 11.0 9.5 9.5 9.5 9.1 10.5 11.5	21.0 22.0 21.0 21.5 20.0 19.5 21.0 18.0 15.5 16.5 16.5 16.5 16.5	MIN 12.C 15.0 14.5 14.5 14.0 13.5 11.0 12.0 12.0 12.0 12.0 12.0	19.0 20.0 21.0 21.0 21.0 22.0 22.0 23.0 21.0 20.5 24.5 25.5 26.0 27.0	15.0 18.5 18.5 19.0 19.0 20.5 19.0 19.5 19.5 19.5 19.0 19.5 20.0	25.0 26.0 26.0 25.5 28.0 28.0 28.0 28.0 28.0 28.5 28.0 27.0 27.0 28.0	17.0 17.0 18.0 19.0 18.5 19.5 19.5 19.5 20.0 20.0 19.5 19.0	23.0 22.5 18.5 18.6 21.0 22.5 22.5 22.5 22.5 22.5 22.5 21.5 21.5	15.5 15.5 15.5 15.0 12.5 14.5 16.0 15.0 15.0 12.5 11.0 12.0
2 3 4 5 6 7 8 9 10 11 12 13 14	9.0 11.5 12.0 14.0 13.5 13.5 13.6 14.0 13.5 14.0 10.5	5.C 6.55 8.6 8.5 9.55 1C.C 10.5 9.5 7.C 7.C 8.0	16.5 19.5 20.5 20.5 20.0 16.5 18.5 15.5 15.5 17.0 20.0	MIN 10.5 11.5 12.0 14.5 14.0 11.0 11.0 11.0 9.5 9.0 10.5 11.	21.7 22.3 21.0 21.5 20.0 19.5 21.0 15.0 15.0 16.5 16.5 16.5 16.5 16.5 16.5	MIN  12.C 15.0 15.0 14.5 14.5 14.5 11.0 12.0 12.0 12.0 12.0 12.0 14.5	19.0 20.0 21.0 21.0 21.0 22.0 22.0 23.0 21.0 20.5 25.5 25.5 25.5 26.0 27.0 27.0	15.0 18.5 18.5 18.5 19.0 20.5 19.5 19.5 19.5 19.5 20.0 20.5	25.0 26.0 26.0 25.5 28.0 28.0 26.5 28.0 28.0 28.0 27.0 28.5 28.0 27.0 27.0	17.0 17.0 18.0 19.0 19.5 19.5 19.5 19.0 19.5 20.0 20.0 20.0 20.0	23.0 22.5 22.5 18.5 18.6 21.0 22.5 22.5 21.5 22.5 21.5 22.5 17.5 18.0	15.5 15.5 15.5 15.0 12.5 14.5 16.0 16.0 15.0 15.0 15.0 12.5 11.0 12.5 11.0 12.0 13.5
2 3 4 5 6 7 8 9 10 11 12 13 14 15	9.C 11.5 12.C 14.0 13.5 13.C 13.5 14.C 14.C 13.5 10.5 10.5	5.C 6.5 8.5 8.5 8.5 9.5 10.0 10.0 9.5 8.5 7.0 7.0 8.0 7.0	MAX  16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 20.5 21.0 20.0 20.0 16.0 16.0	MIN  10.5 11.5 12.0 14.5 14.0 13.0 11.0 10.0 9.5 9.0 10.5 11.5 12.0 13.5 13.5 13.5 13.5	21.7 22.0 21.5 20.0 19.5 21.0 15.0 15.5 16.5 16.5 16.5 16.5 16.5 16.5 16.5	MIN  12.C 15.0 15.0 14.5 14.5 14.5 11.0 12.0 12.0 12.0 12.0 12.0 14.0 15.0	19.0 20.0 21.0 21.0 22.0 22.0 22.0 23.0 21.0 20.5 25.5 25.5 25.5 25.5 27.0 27.0 26.5 26.5 28.6	15.0 18.0 18.5 18.5 19.0 19.0 20.5 19.0 19.5 19.0 19.5 19.0 20.0 20.0	25.0 26.0 26.0 25.5 28.0 28.0 26.5 28.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 26.5 27.0	17.0 17.0 18.0 19.0 19.5 19.5 19.5 19.0 19.0 20.0 20.0 19.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	23.0 22.5 22.5 18.5 18.6 21.0 22.5 22.5 21.5 22.5 21.5 22.5 17.5 18.0 18.0 19.0 19.5	15.5 15.5 15.5 15.5 12.5 14.5 16.0 15.0 15.0 15.0 12.0 12.0 12.0
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20	9.0 11.0 11.5 12.6 14.0 13.5 13.6 13.5 14.0 13.5 14.0 10.5 10.5 10.5	5.C 6.5 8.5 8.5 9.5 9.5 10.0 10.0 9.5 9.5 7.0 7.0 8.0 7.0 8.0	MAX  16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 20.5 21.0 20.0 20.0 16.0 16.0 16.0	MIN  10.5 11.5 12.0 14.0 13.0 11.0 11.0 10.0 9.5 9.5 9.5 12.0 13.5 13.5 13.5 13.5 13.5	21.7 22.0 21.5 20.0 19.5 21.0 15.0 15.5 16.5 16.5 16.5 16.5 16.5 16.5 21.5 22.0 25.6 26.0	MIN  12.C 15.0 15.0 14.5 14.5 14.0 13.5 11.0 11.0 12.0 12.0 12.0 12.0 14.5 14.5 14.0 15.0 16.5 17.0	MAX 19.0 2C.0 21.0 21.0 21.0 22.0 23.0 20.5 24.5 25.5 26.0 27.0 26.5 26.5 26.5 28.5	15.0 18.0 18.5 18.5 19.0 19.0 20.5 19.0 19.5 19.0 19.5 20.0 20.0 20.0 20.0 20.0 20.0 20.0	25.0 26.0 26.0 25.5 28.0 28.0 26.5 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	17.0 17.0 18.0 19.0 19.5 19.5 19.5 19.0 19.0 20.0 20.0 20.0 20.5 20.0 20.5 20.0	MAX 23.0 22.5 22.5 18.5 18.6 21.0 22.5 22.5 22.5 21.5 17.5 18.0 18.0 18.5 19.0 19.5	15.5 15.5 15.5 15.5 12.5 14.5 16.0 15.0 15.0 15.0 12.5 12.0 12.0 12.0 12.0 12.0 13.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 17 17 19 20 20	9.0 11.0 11.5 12.5 14.0 14.0 13.5 13.0 13.0 14.0 14.0 14.0 10.5	5.5 8.6 8.5 8.5 9.5 10.0 10.5 9.5 7.0 0.0 10.5 8.5 9.5 7.0 9.5 7.0 9.5 7.0 9.5 7.0 9.5 7.0 9.5 7.0 9.5 7.0 9.5 7.0 9.5 7.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	MAX 16.5 19.5 20.5 20.0 16.5 18.6 15.5 15.0 17.6 20.0 16.0 17.6 20.0	MIN  10.5 11.5 12.6 14.0 13.0 11.0 11.0 9.5 9.5 9.0 10.5 12.0 13.5 13.5 13.5 12.0 10.0	21.7 22.3 21.5 20.0 19.5 21.6 15.5 15.5 16.5 16.5 16.5 16.5 21.5 24.0 25.5	MIN  12.C 15.0 15.0 14.5 14.5 15.0 14.5 11.0 12.0 12.0 12.0 12.0 14.5 14.5 14.5 11.0	MAX 19.0 2C.0 21.0 21.0 22.0 22.0 23.0 20.5 24.5 25.5 26.5 26.5 28.0 27.0 28.5 28.6 27.0 26.5 28.6 28.6 28.6 28.6 28.6	15.0 18.0 18.5 18.5 19.0 19.0 20.5 19.5 19.5 19.5 19.5 20.0	25.0 26.0 26.0 25.5 28.0 28.0 26.5 28.0 28.5 28.0 27.0 27.0 27.0 26.5 27.0 26.5	17.0 17.0 18.0 19.0 19.5 19.5 19.5 19.5 20.0 20.0 20.0 20.0 20.0 20.5 20.0 20.0	MAX 23.0 22.5 22.5 18.6 21.6 22.5 22.5 22.5 22.5 22.5 17.5 18.6 19.6 19.6 17.0	15.5 15.5 15.5 15.5 12.5 14.5 16.0 15.0 15.0 15.0 12.5 11.0 12.5 12.0 12.0 12.0 12.0 12.0 12.0
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 21 22	9.0 11.0 11.5 12.6 14.0 13.5 13.6 13.5 14.0 13.5 14.0 13.5 14.0 13.5 14.0 13.5 14.0 13.5 14.0 13.5 14.0 13.5 14.0	5.C 6.55 8.G 8.G 8.5 9.55 1C.C 10.5 9.5 7.C 8.G 7.C 8.G 7.C 8.G	MAX  16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 20.5 21.0 20.0 16.0 17.0	MIN  10.5 11.5 12.0 14.0 13.0 11.0 11.0 12.0 9.5 9.5 9.5 12.0 13.5 13.5 12.0 10.5 11.5 12.0 13.6	21.7 22.3 21.0 21.5 20.0 19.5 21.0 15.0 15.5 16.5 16.5 16.5 16.5 16.5 24.0 25.5 26.0	MIN  12.C 15.0 14.5 14.5 14.0 13.5 11.0 11.0 12.0 12.0 12.0 12.0 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5	MAX 19.0 20.0 21.0 21.0 22.0 23.0 23.0 20.5 24.5 25.5 26.0 27.0 27.0 26.5 26.5 28.5 26.5 28.5	15.0 18.0 18.5 19.0 19.0 20.5 19.5 19.5 19.5 19.5 20.0	25.0 26.0 26.0 26.5 28.0 28.0 28.0 28.0 28.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	17.0 17.0 18.0 19.0 19.5 19.5 19.5 19.5 20.0 20.0 20.0 19.5 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20	MAX 23.0 22.5 22.5 22.5 18.6 21.0 22.5 22.5 22.5 21.0 17.5 18.0 18.0 19.5 16.5 16.0 17.5	15.5 15.5 15.5 15.0 12.5 14.5 16.0 16.0 15.0 15.0 12.5 11.0 12.0 12.0 12.0 12.5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 21 22 23 24	9.0 11.0 11.5 12.0 14.0 13.5 13.5 13.5 14.0 14.0 13.5 11.5 10.5 10.5 10.5 11.5 10.5 11.5 10.0 11.5	5.C5 8.5 8.5 8.5 9.5 10.0 10.5 9.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5	16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 20.0 20.0 20.0 16.0 17.0 20.0 17.0 20.0 16.0 17.0 20.0 17.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN  10.5 11.5 12.0 14.0 13.0 11.0 11.0 12.0 9.5 9.5 9.5 12.0 13.5 13.5 12.0 10.5 11.5 13.5 12.0 13.5 13.5	21.7 22.0 21.0 21.5 20.0 19.5 21.0 15.0 15.5 16.5 16.5 16.5 16.5 21.5 22.0 25.5 26.0 25.5 26.0	MIN  12.C 15.0 14.5 14.5 14.0 13.5 11.0 11.0 12.0 12.0 12.0 12.0 14.5 14.5 14.5 14.0 15.0 16.5 17.0 18.5	19.0 2C.0 21.0 21.0 22.0 22.0 23.0 21.0 20.5 25.5 25.5 26.0 27.0 27.0 28.5 26.5 28.5 26.5 28.5 28.5 28.5 28.5 27.0 27.0	15.0 18.0 18.5 19.0 19.0 20.5 19.5 19.5 19.5 19.5 20.0 20.9 21.0 20.9 21.0 20.9 21.0	25.0 26.0 26.0 25.5 28.0 28.0 26.5 28.0 28.5 28.0 27.0 27.0 27.0 26.5 27.0 26.5	17.0 18.0 19.0 19.0 18.5 19.5 19.5 19.0 19.0 19.0 20.0 20.0 20.0 20.5 20.5 20.0 19.5	MAX 23.0 22.5 22.5 18.5 18.6 21.0 22.5 22.5 22.5 22.5 17.5 18.0 17.5 18.0 19.5 16.0 17.5 18.0 17.5 16.7	15.5 15.5 15.5 15.0 12.5 14.5 16.0 16.0 15.0 15.0 12.5 14.5 12.0 12.0 12.0 12.0 12.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 21 22 23 24 25	9.0 11.0 11.5 12.0 14.0 13.5 13.5 13.5 14.0 14.0 10.5 10.5 10.5 10.5 11.5 10.5 11.5 10.5 11.5	5.C 6.5 8.G 8.G 8.S 5.5 1C.C 10.5 9.5 7.C 8.G 7.C 8.G 7.C 8.G 7.C 8.G 7.C 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	MAX  16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 20.5 21.0 20.0 16.0 17.6 20.0 17.6 20.0 17.6 20.0 20.0	MIN  10.5 11.5 12.0 14.0 13.0 11.0 11.0 10.0 10.0 9.5 9.5 9.5 11.5 13.5 12.0 13.5 13.5 12.0 13.5 13.5 13.5 13.5 13.5 13.5	21.7 22.0 21.5 20.0 19.5 21.0 15.0 15.5 16.5 16.5 16.5 16.5 21.5 22.6 25.5 26.0 25.5 25.5 25.5 25.5	MIN  12.C 15.0 15.0 14.5 14.5 14.0 13.5 11.0 11.0 12.0 12.0 12.0 12.0 14.5 14.0 17.0 18.5 17.0 18.5 17.0 18.5 17.0 18.5	MAX 19.0 2C.0 21.0 21.0 22.0 23.0 23.0 23.0 24.5 25.5 26.0 27.0 27.0 28.5 28.5 26.5 28.7 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	15.0 18.0 18.5 19.0 19.0 20.5 19.5 19.5 19.5 19.5 20.0	25.0 26.0 26.0 25.5 28.0 28.0 28.0 28.5 28.0 27.0	17.0 18.0 19.0 19.0 19.5 19.5 19.5 19.0 19.0 19.0 20.0 20.0 20.0 20.5 20.0 19.5 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MAX 23.0 22.5 22.5 18.5 18.6 21.0 22.5 22.5 22.5 22.5 17.5 18.0 19.0 19.5 16.0 17.5 18.0 17.5 18.0	15.5 15.5 15.5 15.0 12.5 14.5 16.0 16.0 15.0 15.0 12.5 12.0 12.0 12.0 12.0 12.5 14.5 14.5 12.5 14.5 12.5 14.5 12.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14
2 3 3 4 5 5 6 7 8 8 9 1 1 1 2 1 3 1 4 1 5 1 6 1 7 1 3 1 9 2 0 2 1 2 2 3 2 2 4 2 5 2 5 2 6	9.0 11.0 11.5 12.0 14.0 13.5 13.5 13.5 14.0 13.5 10.5 10.5 10.5 10.5 11.5 10.0 11.5 10.0 11.5	5.5 8.6 8.6 8.5 9.5 10.0 10.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	MAX  16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 15.5 17.0 20.0 16.0 17.0 20.0 16.0 21.5 21.0 20.0 21.5 21.0 20.0	MIN  10.5 11.5 12.6 14.0 13.0 11.0 11.0 10.0 9.5 9.0 10.5 11.5 12.0 10.5 12.0 10.0 13.5 13.5 13.5 13.5 13.5 13.5 13.5 13.5	MAX 21.7 22.3 21.0 21.5 20.0 19.5 21.0 15.0 15.5 16.5 16.5 16.5 16.5 24.0 25.5 26.0 25.5 26.0 25.5 26.0	MIN  12.C 15.0 15.0 14.5 14.5 14.0 13.5 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 19.0 2C.0 21.0 21.0 22.0 23.0 23.0 20.5 24.5 25.5 25.5 26.0 27.0 28.5 26.5 26.5 27.0 27.0 27.0 27.0	15.0 18.0 18.5 18.5 19.0 19.0 20.5 19.5 19.5 19.5 20.0	25.0 26.0 26.0 25.5 28.0 28.0 28.0 28.5 28.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	17.0 17.0 18.0 19.0 18.5 19.5 19.5 19.5 20.0 19.5 20.0 19.5 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MAX 23.0 22.5 22.5 18.6 21.0 21.0 22.5 22.5 22.5 21.5 21.0 17.5 18.5 19.0 17.0 17.0 17.0 17.0 17.0	15.5 15.5 15.5 15.5 15.0 12.5 14.5 16.0 15.0 15.0 15.0 12.0 12.0 12.0 12.0 12.5 11.5 12.5 11.5 12.5 11.5 12.5 11.5 12.5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 21 22 23 24 25	9.0 11.0 11.5 12.0 14.0 13.5 13.5 13.5 14.0 14.0 13.5 10.5 10.5 10.5 10.5 11.5 10.5 11.5 10.5 11.5 10.5 11.5 11	5.55 8.6 8.5 9.5 10.5 9.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 8.5 7.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	MAX  16.5 19.5 20.5 20.5 20.0 16.5 18.6 19.5 19.5 19.6 19.6 19.6 20.0 16.0 19.6 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20	MIN  10.5 11.5 12.0 14.0 13.0 11.0 11.0 12.0 9.5 9.5 9.5 12.0 13.5 13.5 12.0 13.5 13.5 12.0 13.5 13.5 14.0	HAX 21.7 22.3 21.5 20.5 19.5 19.5 18.0 15.0 15.0 16.5 16.5 16.5 16.5 24.0 25.5 24.0 25.5 25.5 26.0 29.5	MIN  12.C 15.0 15.0 14.5 14.5 14.5 14.0 13.0 11.0 12.0 12.0 12.0 12.0 12.0 17.0 18.0 17.0 18.0 19.0	MAX 19.0 2C.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 24.5 25.5 26.0 27.0 27.0 28.5 28.5 26.5 28.7 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	15.0 18.0 18.5 19.0 19.0 20.5 19.5 19.5 19.5 19.5 20.0	25.0 26.0 26.0 25.5 28.0 28.0 28.0 28.0 28.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	17.0 18.0 19.0 19.0 18.5 19.5 19.5 19.0 19.0 19.5 20.0 20.0 20.0 20.5 20.5 20.5 20.5 20	MAX 23.0 22.5 22.5 18.6 22.5 22.5 22.5 21.6 22.5 21.6 17.5 18.6 17.6 18.6 17.0 17.6 18.0 17.0 17.0 18.0 17.0 17.0 17.0 18.0	15.5 15.5 15.5 15.0 12.5 14.5 16.0 16.0 15.0 15.0 12.5 12.0 12.0 12.0 12.0 12.0 12.5 14.5 12.5 14.5 12.5 14.5 12.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14
2 3 3 4 5 6 7 8 9 9 1 1 1 1 2 1 3 1 4 4 1 5 1 7 1 4 9 2 0 2 2 2 3 2 4 2 5 2 5 2 6 2 7 2 9 2 9	9.0 11.0 11.5 12.0 14.0 13.5 13.5 13.5 14.0 14.0 13.5 10.5 10.5 10.5 10.5 10.5 11.5 10.5 11.5 10.5 11.5 10.5 11.5 11	5.5 8.6 8.6 8.5 9.5 10.0 10.5 9.5 9.5 7.0 7.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	MAX  16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 15.5 17.0 20.0 16.0 17.0 20.0 16.0 21.5 21.0 20.0 21.5 21.0 20.0	MIN  10.5 11.5 12.6 14.0 13.0 11.0 11.0 10.0 9.5 9.0 10.5 11.5 12.0 10.5 12.0 10.0 13.5 13.5 13.5 13.5 13.5 13.5 13.5 13.5	MAX 21.7 22.3 21.0 21.5 20.0 19.5 21.0 15.0 15.5 16.5 16.5 16.5 16.5 24.0 25.5 26.0 25.5 26.0 25.5 26.0	MIN  12.C 15.0 15.0 14.5 14.5 14.0 13.5 11.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 19.0 2C.0 21.0 21.0 22.0 23.0 23.0 20.5 24.5 25.5 25.5 26.0 27.0 28.5 26.5 26.5 27.0 27.0 27.0 27.0	15.0 18.0 18.5 18.5 19.0 19.0 20.5 19.5 19.5 19.5 20.0	25.0 26.0 26.0 25.5 28.0 28.0 28.0 28.5 28.0 28.0 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	17.0 17.0 18.0 19.0 18.5 19.5 19.5 19.5 20.0 19.5 20.0 19.5 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MAX 23.0 22.5 22.5 18.6 21.0 21.0 22.5 22.5 22.5 21.5 21.0 17.5 18.5 19.0 17.0 17.0 17.0 17.0 17.0	15.5 15.5 15.5 15.5 15.0 12.5 14.5 16.0 15.0 15.0 15.0 12.0 12.0 12.0 12.0 12.5 11.5 12.5 11.5 12.5 11.5 12.5 11.5 12.5
2 3 3 4 5 6 7 8 9 1 9 1 1 1 1 2 1 3 1 4 5 1 6 1 7 1 7 1 9 2 9 2 1 2 2 2 3 2 4 5 2 7 9 2 9 3 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	9.0 11.0 11.5 12.0 14.0 13.5 13.5 14.0 13.5 10.5 10.5 10.5 10.5 11.5 10.0 11.5 10.0 11.5 10.0 11.5	5.55 8.65 8.55 10.05 9.55 10.05 9.55 7.00 9.55 7.00 9.55 9.55 9.55 9.55 9.55	MAX  16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 20.0 16.0 20.0 16.0 21.0 20.0 21.0 20.0 21.5 21.0 20.5	MIN  10.5 11.5 12.6 14.0 13.0 11.0 11.0 10.0 9.5 9.0 10.5 11.5 12.0 10.5 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 21.7 22.3 21.0 21.5 20.0 19.5 21.0 15.0 15.5 16.5 16.5 26.0 25.5 26.0 25.5 26.0 22.0	MIN  12.C 15.0 15.0 14.5 14.5 14.0 13.5 11.0 11.0 12.0 12.0 12.0 12.0 12.0 12.0	MAX 19.0 2C.0 21.0 21.0 22.0 23.0 23.0 20.5 24.5 25.5 25.5 26.0 27.0 28.5 28.0 28.5 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	15.0 18.0 18.5 18.5 19.0 19.0 20.5 19.5 19.0 19.5 20.0 19.5 20.0	25.0 26.0 26.0 25.5 28.0 28.0 28.0 28.5 28.0 28.5 28.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27	17.0 17.0 18.0 19.0 18.5 19.5 19.5 19.0 19.0 20.0 19.5 20.0 19.5 20.0 19.5 20.0 19.5 20.0 19.5 20.0 19.5 20.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 1	MAX 23.0 22.5 22.5 18.0 21.0 22.5 22.5 22.5 22.5 21.0 17.5 18.0 17.5 18.0 17.0 17.0 17.0 17.0 17.0 17.0	15.5 15.5 15.5 15.5 15.0 12.5 14.5 16.0 15.0 15.0 15.0 12.5 11.0 12.0 12.0 12.5 11.5 12.5 11.5 12.5 11.5 12.5 11.5 12.5 11.5 12.5
2 3 3 4 5 6 7 8 9 9 1 1 1 1 2 1 3 1 4 4 1 5 1 7 1 4 9 2 0 2 2 2 3 2 4 2 5 2 5 2 6 2 7 2 9 2 9	9.0 11.0 11.5 12.0 14.0 13.5 13.5 13.5 14.0 14.0 13.5 10.5 10.5 10.5 10.5 10.5 11.5 10.5 11.5 10.5 11.5 10.5 11.5 11	5.55 8.50 8.5 9.55 10.5 9.55 7.0 8.5 7.0 8.5 9.55 7.0 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5 9.5	16.5 19.5 20.5 20.0 16.5 18.0 14.5 15.5 15.0 20.0 20.0 20.0 17.0 20.0 17.0 20.0 17.0 20.0 18.0 17.0 20.0 20.0 18.0 19.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 2	MIN  10.5 11.5 12.6 14.0 13.0 11.0 11.0 12.0 13.5 13.5 12.0 13.5 13.5 13.5 12.0 13.5 13.5 14.0 13.5 14.0	HAX 21.7 22.3 21.5 20.0 19.5 19.5 18.0 15.0 15.0 16.5 16.5 16.5 24.0 25.5 24.0 25.5 24.0 25.5 26.0 27.5 28.0 29.0 29.0 29.0 29.0 20.0 20.0 20.0 20	MIN  12.C 15.0 15.0 14.5 14.5 14.5 14.0 13.5 11.0 12.0 12.0 12.0 12.0 14.5 14.0 17.0 18.0 17.0 18.0 19.0 18.0 19.0 18.0 19.0 18.0 19.0	MAX 19.0 2C.0 21.0 21.0 21.0 22.0 23.0 23.0 23.0 24.5 25.5 26.0 27.0 27.0 27.0 28.5 28.5 28.5 28.5 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.0	15.0 18.0 18.0 18.5 19.0 19.0 20.5 19.5 19.0 19.5 19.0 19.5 20.0	25.0 26.0 26.0 25.5 28.0 28.0 28.0 28.0 28.0 27.0 26.5 26.0	17.0 18.0 19.0 19.0 19.5 19.5 19.5 19.5 20.0 20.0 20.0 20.0 20.5 20.0 20.5 20.0 19.5 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0	MAX 23.0 22.5 22.5 18.6 22.5 22.5 22.5 21.6 22.5 21.6 22.5 17.5 17.6 18.6 17.0 17.0 18.0 17.0 18.0 17.0 18.0	15.5 15.5 15.5 15.0 12.5 14.5 16.0 16.0 15.0 15.0 15.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12

#### HONEY LAKE BASIN

#### 1035 6500 SUSAN RIVER AT SUSANVILLE, CALIF.

LOCATION.--Lat 40°25'03", long 120°40'15", in SWiNE; sec. 31, T.30 N., R.12 E., Lassen County, at gaging station 0.5 mile west of Susanville and 1.1 miles upstream from Piute Creek.

DRAINAGE AREA. -- 184 sq mi.

PERIOD OF RECORD. --Chemical analyses: October 1951 to September 1958 (partial records), October 1958 to September 1970.

REMARKS. -- Records furnished by California Department of Water Resources and reviewed by U.S. Geological Survey.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	TEMPER- ATURE (DEG C)	DIS- SOLVED DXYGEN (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS SOLVED MAG NE- SIUM (MG) (MG/L)	SUDIUM (NA) (MG/L)	PU- TAS- SIUM (K) (MG/L)	BICAR- BDNATE (HCD3) (MG/L)	SULFATE (SU4) (MG/L)	CHLO- RIDE (CLI (MG/L)
UCT. 16	0655	34	5.0	11.0			5.6		92		2.0
NOV.		14									
19 DEC.	0815		0.0	12.4			4.9		96		-8
0 } JAN .	1535	16	6.1	11.4			5.9		109		.8
13 F£B.	1505	268	1.1	12.3			3.7		48		2.5
10 MAR.	1540	226	5.0	12.1			3.7		53		• 9
10 APR.	1610	190	5.6	12.0			4.3		56		1.4
15 MAY	1435	193	6.0	11.6			2.8		42		•0
13 JUNE	1755	228	12.0	9.8	7.2	3.5	3.0	.9	46	.0	•0
18 JULY	0700	100	14.0	9.3			2.2		42		.9
15	0700	71	17.2	8.4			2.6		42		.5
4UG. 04	1400	33	20.0	8.3			3.4		73		.3
SEP. 01	1505	18	20.0	8.7			3.7		61		.0
DATE	NITRATE (ND3) (MG/L)	DIS- SOLVED BURDN (8) (UG/L)	DIS- SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	DIS- SOLVEO SOLIDS (TONS PER DAY)	HARD- NESS (CA+MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	PERCENT SODIUM	SUDIUM AD- SORP- TION RATIO	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)
OCT.	(ND3)	SOL VED BURDN (8)	SOLVED SOLIDS (RESI- OUE AT 180 C)	SOLVEO SOLIDS (TONS PER	NESS (CA+MG)	CAR- SONATE HARD- NESS	LINITY AS CACD3	SODIUM	AD- SORP- TIDN RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS)
DCT. 16 NUV.	(ND3) (MG/L)	SOLVED BURON (8) (UG/L)	SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	SOLVEO SOLIDS (TONS PER DAY)	NESS (CA+MG) (MG/L)	CAR- 80NATE HARD- NESS (MG/L)	LINITY AS CACO3 (MG/L)	SODIUM 13	AD- SORP- TIDN RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 7.8
16 NUV. 19 DEC.	(ND3) (MG/L)	SOLVED BURDN (8) (UG/L)	SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	SOLVEO SOLIDS (TONS PER DAY)	NESS (CA+MG) (MG/L) 84	CAR- 80NATE HARD- NESS (MG/L)	LINITY AS CACO3 (MG/L) 75	\$001UM 13	AD- SORP- TIDN RATIO	FIC COND- UCTANCE (MICRO- MHOS)	(UNITS) 7.8 7.8
OCT. 16 NUV. 19 DEC. 09	(NO3) (MG/L) 	SOLVED BURON (8) (UG/L) 50	SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	SOLVEO SOLIDS (TONS PER DAY)	NESS (CA,MG) (MG/L) 84 71	CAR- 80NATE HARD- NESS (MG/L)	LINITY AS CACD3 (MG/L) 75 79	\$001UM 13 13	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS)	7.8 7.8 7.8 7.7
OCT. 16 NUV. 19 DEC. 09 JAN. 13	(ND3) (MG/L)  	SOL VED BURDN (8) (UG/L) 50 0	SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	SOLVEO SOLIDS (TONS PER DAY)	NESS (CA+MG) (MG/L) 84 71 75	CAR- 80NATE HARD- NESS (MG/L)	LINITY AS CACO3 (MG/L) 75 79 89	13 13 15	AD- SORP- TION RATIO	FIC COND- UCTANCE (MICRO- MHOS) 148 158 172	7.8 7.8 7.8 7.7 7.1
OCT. 16 NUV. 19 DEC. 09 JAN. 13 FEB. 10	(ND3) (MG/L)	SOL VED BURDN (8) (UG/L) 50 0	SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	SOLVEO SOLIDS (TONS PER DAY)	NESS (CA+MG) (MG/L) 84 71 75 38 40	CAR- BONATE HARD- NESS (MG/L)	LINITY AS CACD3 (MG/L) 75 79 89 39	13 13 15 17	AD- SORP- TIDN RATIO .3 .3 .3	FIC COND- UCTANCE (MICRO- MHOS) 148 158 172 89	7.8 7.8 7.7 7.1
DCT. 16 NUV. 19 DEC. 09 JAN. 13 FEH. 10 MAR.	(NO3) (MG/L)	SOL VED BURDN (8) (UG/L) 50 0 0 50 20	SOLVED SOLIDS (RESI- OUE AT 180 C) (MG/L)	SOLVEO SOLIOS (TONS PER OAY)	NESS (CA+MG) (MG/L) 84 71 75 38 40	CAR- BONATE HARD- NESS (MG/L) 9 0	LINITY AS CACO3 (MG/L) 75 79 89 39 43	13 13 15 17 17	AD- SORP- TIDN RATIO  .3  .3  .3  .3  .3	FIC COND- UCTANCE (MICRO- MHOS) 148 158 172 89	7.8 7.8 7.7 7.1 7.4
OCT. 16 NUV. 19 DEC. 09 JAN. 13 FEH. 10 MAR. 15 MAY	(NO3) (MG/L)	SOL VED BURDN (8) (UG/L) 50 0 50 20 100	SOLVED SOLIDS (RESI- QUE AT 180 C) (MG/L)	SOLIVEO SOLIOS (TONS PER OAY)	NESS (CA+MG) (MG/L) 84 71 75 38 40 42	CAR- BONATE HARD- NESS IMG/L)  9 0 0 0	LINITY AS CACD3 (MG/L) 75 79 89 39 43 46	\$001UM 13 13 15 17 17 18	.3 .3 .3 .3 .3	FIC COND- UCTANCE (MICRO- MHOS) 148 158 172 89 93 98 78	(UNITS)  7.8  7.8  7.7  7.1  7.4  7.7
OCT. 16 NUV. 19 DEC. 09 JAN. 13 FEH. 10 APR. 15 MAY 13 JUNE	(NO3) (MG/L)	SOL VED BURDN (8) (8) (UG/L) 50 0 0 50 20 100 0 0	SOL VED SOL 10S (RES 1- OUE AT 1 180 C) (MG/L)	SOLVEO SOLIOS SOLIOS (TONS PER DAY)	NESS (CA,MG) (MG/L) 84 71 75 38 40 42 43	CAR- 80NATE HARO- NESS (MG/L)  9 0 0 0 0 9	LINITY AS CAC03 (MG/L) 75 79 89 39 43 46 34	\$001UM 13 13 15 17 17 18 12	AD- SORP- TIDN RATIO .3 .3 .3 .3 .3 .3	FIC COND- UCTANCE (MICRO- MHOS) 148 158 172 89 93 98 78	(UNITS)  7.8  7.8  7.7  7.1  7.4  7.7  7.5  7.7
DCT. 16 NUV. 19 DEC. JAN. 13 FEH. 10 APR. 15 MAY 13 JUNE 18 JULY	(NO3) (MG/L)	SOL VED BURDN (8) (UG/L) 50 0 0 50 100 0 0 0 50 50 50 50 50 50 50 50 50 50 5	SOLVED SOLIDS (RESI- QUE AT 180 C) (MG/L)	SOLIVEO SOLIOS (TONS PER OAY)	NESS (CA-MG) (MG/L)  84  71  75  38  40  42  43  32  36	CAR- BONATE HARD- NESS (MG/L)  9  0  0  0  2	LINITY AS CACO3 (MG/L) 75 79 89 39 43 46 34 38	\$001UM 13 13 15 17 17 18 12 16	33 .3 .3 .3 .3 .2 .2 .2 .2	FIC CUND- UCTANCE (MICRO- MHOS)  148  158  172  89  93  98  78  76	(UNITS)  7.8  7.8  7.7  7.1  7.4  7.7  7.5  7.7
DCT. 16 NUV. 19 DEC. 09 JAN. 13 FEH. 10 ARR. 10 APR. 15 MAR. 15 MAR. 15 MAR. 15 MAR. 15 MAR. 168	(NO3) (MG/L)	SOL VED BURDN (8) (8) (UG/L) 50 0 0 50 20 100 0 0	SOL VED SOL 10S (RES 1- OUE AT 1 180 C) (MG/L)	SOLVEO SOLIOS SOLIOS (TONS PER DAY)	NESS (CA,MG) (MG/L) 84 71 75 38 40 42 43	CAR- 80NATE HARO- NESS (MG/L)  9 0 0 0 0 9	LINITY AS CAC03 (MG/L) 75 79 89 39 43 46 34	\$001UM 13 13 15 17 17 18 12	AD- SORP- TIDN RATIO .3 .3 .3 .3 .3 .3	FIC COND- UCTANCE (MICRO- MHOS) 148 158 172 89 93 98 78	(UNITS)  7.8  7.8  7.7  7.1  7.4  7.7  7.5  7.7
OCT. 16 NUV. 19 DEC. 09 JAN. 13 FEH. 10 MAR. 10 APR. 15 APR. 15 JUNE 18 JULY	(NG3) (MG/L)	SOL VED BURDN (8) (UG/L) 50 0 0 50 100 0 0 0 50 50 50 50 50 50 50 50 50 50 5	SOL VED SOL 10S (RES1- OUE AT 180 C1 (MG/L)	SOLVEO SOLIOS SOLIOS (TONS PER DAY)	NESS (CA-MG) (MG/L)  84  71  75  38  40  42  43  32  36	CAR- BONATE HARD- NESS (MG/L)  9  0  0  0  2	LINITY AS CACO3 (MG/L) 75 79 89 39 43 46 34 38	\$001UM 13 13 15 17 17 18 12 16	33 .3 .3 .3 .3 .2 .2 .2 .2	FIC CUND- UCTANCE (MICRO- MHOS)  148  158  172  89  93  98  78  76	(UNITS)  7.8  7.8  7.7  7.1  7.4  7.7  7.5  7.7

# ABERT LAKE BASIN 361

## 10387100 CHEWAUCAN RIVER NEAR VALLEY FALLS, OREG.

LOCATION.--Lat 42°30'57", long 120°15'03", in SW\(\frac{1}{2}\) sec.21, T.35 S., R.21 E., Lake County, downstream from dam at Clark and Johnson Ranch, downstream from Crooked Creek 2.7 miles northeast of Valley Falls.

PERIOD OF RECORD. -- Chemical analyses: October 1964 to September 1970.

REMARKS .-- Prior to October 1968, published as station 10386850.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM PLUS PO- TAS- SIUM (NA+K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SUL FATE (SO4) (MG/L)
CC T.								
23 NOV.	1700	40	11	4.0	11	77	0	•0
14 JAN.	1600	42	11	4.0	A14	87	0	.0
26 FEB.	1500	800	8.0	2.0	A14	58	0	4.0
19 MAR.	1630	180	13	5.0	A24	99	0	9.0
24 APR.	1630	150	12	4.0	A18	89	0	6.0
24 MAY	1630	30	18	7.0	A30	150	0	10
20	1700	200	7.0	3.0	A9.0	58	0	• 0
JUNE 24	1630	100	17	6.C	A20	123	0	8.0
SEP. 17	1530	5.0	16	5.0	A16	110	0	5.0

DATE	CHLO- RIDE (CL) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	ALKA- LINITY AS CACO3 (MG/L)	TEMPER- ATURE (DEG C)
DCT.							
23 NDV.	2.0	42	0	130	7.1	63	9.0
14 JAN.	3. 0	44	0	150	7.4	71	9.0
26	1.0	30	0	100	7.1	48	2.5
FE8.	10			210	7.8	81	3.5
MA R. 24	5.0	46	0	190	7.7	73	9.0
A PR. 24 May	4. C	74	0	270	7.3	123	9.0
20 JUNE	.0	28	0	100	7.3	48	14.5
24 SEP.	2.0	69	0	220	7.1	101	21.0
17	1.0	62	Q	191	7.3	90	16.0

A ESTIMATED.

			CHEMICAL /	ANALYSES,	WATER YE	EAR OCTOBE	R 1969 TO	SEPTEMBE	R 1970			
DATE	TIME	DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
					BEAR	RIVER BAS	IN					
		10011500	BEAR RIVE	ER NEAR L	JTAH~WYOM:	ING STATE	LINE (LAT	40 57 58	LONG 110	51 04)		
DEC 05	~~	45		37	8.8	2.5	.5	156	0	3.8	2.2	
MAR 10		52		42	7.8	2.5	.6	171	0	4.2	2.8	
JUN 09		1050		5.2	1.2	1.0	.6	20	0	2.5	2.2	
0,	1002		RIVER BEI									
DEC	1001	0500 BEA	. KITEK DEI	2011 112021		AK WOODKOI	1, 0140 (	121 42 50	, 20 20,10	111 00 30	• •	
05 1AR		18		48	23	27	2.6	258	0	20	29	
10		28		53	23	24	2.4	260	5	20	24	
09		952		25	14	5.8	1.6	141	0	10	6.4	
		10026	500 BEAR	RIVER NE	AR RANDOI	LPH, UTAH	(LAT 41 4	8 02 LONG	3 111 04 2	20)		
EC				EC	22				_	22	2.	
04 AR		60		58	32	31	1.9	321	0	32	36	
1 N		75		61	29	40	2.1	280	13	34	52	
B		700		43	23	25	3.3	252	0	24	25	
	:	10041000	THOMAS FOR	RK NEAR W	YOMING-I	DAHO STATE	LINE (LA	AT 42 24 1	LO LONG 1:	11 01 30)		
C 4		17		66	25	167	1.2	258	0	60	260	
3		18		76	21	207	1.1	266	0	60	325	
N )		103		63	17	50	1.1	259	7	25	66	
			042700 TH		_	RDER, WYO						
ŧ.			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	SING TON	WEAK DO	NOEN, HIC	(EA) 4E -	22 30 20.00				
3 N		53	11	73	24	108	1.7	286	0	66	151	.1
5 3		38	9.3	66	28	78	1.8	299	0	56	105	•2
•••		7.7	2.0	55	24	81	1.7	244	0	43	119	•1
		10079	9500 BEAR	RIVER AT	T ALEXAND	ER, IDAHO	(LAT 42 3	38 45 LONG	3 111 41 5	55)		
N												
4 N		681	8.6	55	51	33	4.2	374	0	68	36	.3
•••		800	12	56	26	23	2.5	263	0	45	25	•2
••		962	•0	38	55	40	5.0	345	0	71	44	• 3
		100904	50 WEST (	CACHE CAN	AL AT CO	RNISH, UTA	H (LAT 41	L 59 10 LC	NG 111 57	7 14)		
		2.0		106	50	86	8.0	414	0	112	134	
		.50		92	41	7=	10	373	0	100	114	
		120		59	27		5.1	295	0	44	48	
			95400 CUB			N, IDAh. (						
			_					-				
••		12		56	24	21	3.0	302	0	7.5	16	
••		23		55	16	14	2.6	242	7	12	9.9	
•		350		40	10	3.6	1.3	173	0	8.5	1.1	
• •		3.0		42	21	34	7.7	283	0	7.5	28	
		10098	800 WORM	CREEK NE	AR FAIRV	IEW, IDAHO	(LAT 42	00 15 LON	IG 111 51	00)		
		5		6.6	40	24		421	•	17	24	
•••		5		64	40	31	9.4	421	0	17	24	
•••		6		71	37	47	14	416	0	26	52	
•••		7		45	19	9.7	5.1	248	0	8.0	6.0	
		1012	SOO MALA	D RIVER A	AT WOODRU	FF, IDAHO	(LAT 42 C	00 LONG	; 112 14 (	JO )		٠,
ē		36		136	23	625	52	478	0	160	1100	
R 5		70		119	70	511	45	478	0	208	850	
۱ ۱		24		141	60	936	86	548	0	98	1580	
G 4		17		172	66	1520	115	499	0	55	2600	
					-	-	-					

# ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS IN THE GREAT BASIN

DATE	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTIT- UENTS) (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)
		10011500	BEAR RIV	/ER NEAR I		RIVER BAS		r 40 <b>5</b> 7 58	LONG 110	51 04)		
DEC 05		140	132	.19	17.0	128	0	.1	260	7.3		
MAR 10		150	144	.20	21.1	138	0	.1	257	8.2		
JUN 09		30	23	.04	85.0	18	2	.1	34	7.1		
	10020					AR WOODRUF					)	
DEC 05		295	277	.40	14.3	216	4	.8	504	7.5		
MAR 10		290	279	.39	21.9	228	6	•7	502	8.3		
JUN 09		146	132	•20	375	121	5	.2	242	7.9		
		1002	6500 BEAR	RIVER N	AR RANDO	LPH, UTAH	(LAT 41 4	8 02 LONG	111 04 2	0)		
DEC 04		362	349	.49	58.6	276	13	.8	626	7.7		
MAR 11		370	368	.50	74.9	274	23	1.0	648	8.4		
JUN 08		292	267	.40	552	204	0	.8	478	8.1		
•••••	1	10041000	THOMAS FO					T 42 24 1				
DEC	_		mona re	, near		PANO 01410			2 20110 22			
04 MAR		724			32.3	268	56	4.4	1290	8.1	0.0	
03 JUN		860			41.8	276	58	5.4	1500	8.2	1.0	
10		364			101	226	2	1.5	635	8.4	9.5	
		100	42700 THO	MAS FORK	NEAR BOR	DER, WYO.	(LAT 42 1	.2 56 LONG	111 04 1	7)		
APR 23	.00	592			86.0	280	46	2.8	1030	7.9	6.0	
JUN 25	.20	512			52.5	280	35	2.0	876	7.5	20.0	
AUG 17	.00	452			9.46	236	36	2.3	829	7.8	18.0	
		1007	9500 BEAR	RIVER AT	ALEXAND	ER, IDAHO	(LAT 42 3	8 45 LONG	111 41 5	5)		
JAN 14	•02	447			822	347	40	.8	755	8.2	.5	
JUN 26	.21	326			704	246	31	.6	551	7.4	8.5	
AUG 18	.01	429			1110	321	38	1.0	753	7.4	19.0	
	***	10090	450 WEST			RNISH, UTA					27.10	
DEC		20070		onone on	A, GO							
OB MAR		770			4.16	470	131	1.7	1250	8.0	3.0	
12 JUN		676			.91	400	94	1.6	1100	7.8	10.0	
12		378			122	250	15	1.0	644	8.1	14.5	
		100	95400 CUB	RIVER AT	FRANKLII	N, IDAHO (	LAT 42 00	5J LONG	111 49 10	)		
DEC 08		290			9.40	240	0	•6	481	7.5	.5	11.5
MAR 12 Jun		242			15.0	201	0	.4	425	8.4	3.0	12.0
12 AUG		169			160	140	0	.1	268	7.9	7.0	10.7
04		293	'		2.37	190	0	1.1	504	8.0	22.0	4.8
		1009	800 WORM	CREEK NE	AR FAIRV	IEW, IDAHO	(LAT 42	00 15 LQN	G 111 S1	00)		
DEC 08		444			59.9	324	0	.7	711	8.1	2.5	
MAR 03		461			74.7	330	0	1.1	786	8.2	4.5	
JUN 06		215			40.6	192	0	.3	395	8.0	10.0	
			5500 MALA	D RIVER A		FF, IDAHO						
DEC												
09 MAR		2480			241	640	248	11	4160	7.9	8.5	
05 JUN		2090			395	585	193	9.2	3420	8.0	10.0	9.7
11 AUG 04		3350			217	600	151	17 25	5540 7940	8.1 8.0	22.0 27.0	7.8 10.0
04		4870			224	700	291	25	7960	0.0	21.0	70.0

# ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS IN THE GREAT BASIN

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
					BEAR RIVE	R BASIN-	-CONTINUED					
	10127300	BEAR RIVE	R AT MIGR	ATORY BIR	D REFUGE,	NEAR BR	IGHAM CITY	, UTAH (L	AT 41 48	49 LONG 1	12 15 50	1
OCT 02A	1600	450	52	63	404	29	363	15		133	625	
NOV 05	1330	650	48	45	112	11	336	0		47	174	
DEC 09	1030	1130	56	48	114	11	368	0		55	170	
JAN 13	1330	1400	68	44	98	9.9	379	0		54	144	
FEB 06	1030	870	68	42	126	13	372	0		65	185	
MAR 05	1300	815	72	44	158	9.1	349	11		52	250	
APR 09	1100	550	73	36	133	12	360	0		52	210	
MAY 11	1330	1600	52	37	62	8.5	305	0		33	96	
JUN 11	1200	1600	47	24	89	8.9	254	0		30	138	
AUG 04	1030	190	38	57	706	40	328	0		80	1160	
04	1030	170	36	21	100	40	320	Ū		00	1100	
DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
					SALT	TON SEA B	ASIN					
		10256000	WHITEWAT	ER RIVER	AT WHITE	WATER, C	ALIF. (LAT	33 56 4	B LONG 11	.6 38 24) <sup>B</sup>		
DEC 15	1215	41	40	12	11	4.0	174	0	143	26	3.0	.9
MAR 19	0845	30	42	10	11	3.0	164	4	141	26	3.0	.8
JUN 22	1130	8.7	40	12	12	4.0	170	0	139	31	4.0	.9
SEP 21	1230	7.5	40	11	12	4.0	160	0	131	31	4.0	1.0
21	1230	7.5	40	-11		/E RIVER		·	131	31	7.0	1.0
	102611	OO MOLLAVE	RIVER A	THE FORK			INGS, CAL	IS. (LAT	34 20 35	LONG 117	14 01)B	
oct	202022	or Hours		THE TOKE	O, HEAR C	LDAK SIK	INOSY CAL		34 60 32	LONG III		
20 JAN	0915	13	27	6.0	25	2.0	134	0	110	24	8.0	1.4
21 APR	1230	15	27	6.0	21	2.0	128	0	105	17	8.0	.8
16 JUL	1330	25	22	6.0	19	2.0	113	0	93	13	8.0	.8
23	0930	8.7	28	7.0	43	4.0	127	0	104	49	18	1.9
	1026150	MOJAVE	RIVER AT	LOWER NAR	ROWS, NEA	AR VICTOR	VILLE, CAL	.IF. (LAT	34 34 23	LONG 117	19 11)B	
OCT 20	1215	40	37	8.0	45	18	204	0	167	40	24	•6
JAN 21	1345	37	35	9.0	47	26	207	0	170	44	25	•6
APR 16	1445	38	40	10	45	14	206	0	169	44	26	.5
JUL 23	0830	14	44	12	47	7.0	206	0	169	53	32	•5
					WALK	ER LAKE	BASIN					
	:	10293000	EAST WALK	ER RIVER	NEAR BRII	GEPORT,	CALIF. (L	AT 38 19	40 LONG 1	19 12 50)	B	
APR 16	1225	125	20	4.4	14		106	0			3.0	
SEP 22	1320	120	27	3.0	12		117	0			1.2	
		10296000				EVILLE,	CALIF. (LA		47 LONG 1	.19 26 57)		
APR												
16 SEP	1100	210	8.5	2.4	4.0		42	0			1.6	
22	1215	54	15	2.6	7.4		69	0			1.8	

A INCLUDES 10 MG/L OF SILICA (SIO2).
B DATA FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES AND REVIEWED BY U.S. GEOLOGICAL SURVEY.

PHOSE   SOLVED   SO				CHEMICAL	ANALYSES	, WATER Y	EAR DCTOB	BER 1969 TO	SEPTEMB	ER 1970			
10127300   BEAR RIVER AT MIGRATURY BIRD REFUGE, NEAR BRICHAM CITY, UTAM (LAT 41 48 49 UNG 112 15 50)   COTO   CO	DATE	PHATE (PO4)	SOLVED SOLIDS (RESI- DUE AT 180 C)	SOLVED SOLIDS (SUM OF CONSTIT- UENTS	SOLVED SOLIDS - (TONS PER	SOLVED SOLIDS (TONS PER	NESS (CA,MG)	CAR- BONATE HARD- NESS	AD- SORP- TION	CIFIC CON- DUCT- ANCE (MICRO-		ATURE	SOLVED OXYGEN
						BEAR RIVE	R BASIN	CONTINUED					
NOTE   1540   1510   2.05   1870   390   69   8.9   260   18.5   54   54   55   56   56   56   56   5		10127300	BEAR RIVE	R AT MIGRA	TORY BIR	D REFUGE,	NEAR BRI	GHAM CITY,	UTAH (L	AT 41 48 4	9 LONG 11	2 15 50)	
NOTE	ОСТ												
DEC. 10.0	NOV												
JAM	DEC												
FEB. 10.0	JAN												
MAR	FEB												
APR 100	MAR		695	682	• 95	1630	342	37	3.0	1200	8.0		
No.   No.	05 APR		761	751	1.03	1680	360	56	3.6	1350	8.4		
11 442	09		709	693	•96	1050	327	32	3.5	1220	8.1		
11 478	11		442	438	.60	1910	282	32	1.6	749	7.5		
Note	11		478	462	.65	2070	216	8	2.6	838	8.0		
Non-			2200	2240	3.05	1130	332	63	17	3900	8.2		
Dec   10.256000   MHITEMATER RIVER AT WHITE WATER, CALIF.   (LAT 33 56 48 LONG 116 38 24) B   California	DATE	(ND3)	SOLVED BORON (B)	SOLVED SOLIDS (RESI- DUE AT 180 C)	SOLVED SOLIDS (TONS PER	NESS (CA,MG)	CAR- BONATE HARD- NESS	PERCENT SODIUM	AD- SORP- TION	CIFIC CON- DUCT- ANCE (MICRO-		ATURE	SOLVED DXYGEN
Name													
15			10256000	WHITEWATE	R RIVER	AT WHITE	WATER, CA	LIF. (LAT	33 56 48	LONG 116	38 24) <sup>B</sup>		
MAR 19 2.0 0 183 14.8 146 5 14 .4 328 8.5 8.9 9.9  JUN 22 1.5 0 189 4.44 149 10 14 .4 340 7.6 26.1  SEP 21 0 0 191 3.87 145 14 15 .4 331 8.1 23.9 8.4  MOJAVE RIVER BASIN  10261100 MOJAVE RIVER AT THE FORKS, NEAR CEDAR SPRINGS, CALIF. (LAT 34 20 35 LONG 117 14 01) <sup>B</sup> OCT 20 3 30 160 5.62 92 0 36 1.1 284 8.0 11.7 9.7  JAN 21 3 30 161 6.52 92 0 33 1.0 272 8.0 9.4 11.7  APR 16 5 40 142 9.58 80 0 333 9.9 241 8.0 11.7 10.4  JUL 22 19 140 247 5.80 99 0 47 1.9 397 6.9 22.8 6.5  10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CALIF. (LAT 34 32 20 17 17 19 11) <sup>B</sup> OCT 20 4.2 60 280 30.2 125 0 40 1.7 479 7.9 18.3 7.7  JAN 21 6.7 70 314 31.4 124 0 39 1.8 514 8.3 15.6 8.8  APR 16 7.8 80 304 31.2 141 0 38 11.6 491 8.1 15.6 8.2  JUL 22 3.5 110 309 11.7 159 0 38 1.6 518 7.9 22.8 7.3  NALKER LAKE BASIN  APR 16 7.8 80 304 31.2 141 0 38 11.6 491 8.1 15.6 8.2  JUL 23 3.5 110 309 11.7 159 0 38 1.6 518 7.9 22.8 7.3  PALE LAKE BASIN  10293000 EAST MALKER RIVER NEAR BRIDGEPORT, CALIF. (LAT 38 19 40 LONG 119 12 50) <sup>B</sup> APR 16 6 68 192 F7.9 8.0 9.3  APR 16 6 80 213 F7.6 14.0 7.6  E INCLUDES 20 MG/L OF TURBIDITY.	DEC	1 5		102	21 4	140	,	11	,	220	0.3	12.0	
JUN	MAR												
SEP 210 0 191 3.87 145 14 15 .4 331 8.1 23.9 8.4    **MOJAVE RIVER BASIN**  **10261100 MOJAVE RIVER AT THE FORKS, NEAR CEDAR SPRINGS, CALIF. (LAT 34 20 35 LONG 117 14 01)**  **OCT 20 33 30 160 5.62 92 0 36 1.1 284 8.0 11.7 9.7 1.6     **10 15 40 142 9.58 80 0 33 1.0 272 8.0 9.4 11.7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	JUN												
MOJAVE RIVER BASIN   10261100   MOJAVE RIVER AT THE FORKS, NEAR CEDAR SPRINGS, CALIF. (LAT 34 20 35 LONG 117 14 01)   B	SEP												
0CT 20 3 30 160 5.62 92 0 36 1.1 284 8.0 11.7 9.7 31.7 14.01 30 11.7 14.01 30 11.7 14.01 30 11.7 9.7 31 3 30 161 6.52 92 0 33 1.0 272 8.0 9.4 11.7 10.4 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 11.7 14.01 30 30 30 30 30 30 30 30 30 30 30 30 30	21	•0	O	191	3.87				• 4	331	8.1	23.9	8.4
OCT   20   3   30   160   5.62   92   0   36   1.1   284   8.0   11.7   9.7   APR   16   5   70   70   70   70   70   70   70												B	
20 3 30 160 5.62 92 0 36 1.1 284 8.0 11.7 9.7 JAN 21 3 30 161 6.52 92 0 33 1.0 272 8.0 9.4 11.7 APR 16 5 40 142 9.58 80 0 33 1.0 272 8.0 11.7 10.4 JUL 23 19 140 247 5.80 99 0 47 1.9 397 6.9 22.8 6.5 10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CALIF. (LAT 34 34 23 LONG 117 19 11) B CCT 20 4.2 60 280 30.2 125 0 40 1.7 479 7.9 18.3 7.7 JAN 21 6.7 70 314 31.4 124 0 39 1.8 514 8.3 15.6 8.8 APR 16 7.8 80 304 31.2 141 0 38 16 491 8.1 15.6 8.2 JUL 23 3.5 110 309 11.7 159 0 38 1.6 491 8.1 15.6 8.2 JUL 23 3.5 110 309 11.7 159 0 38 1.6 518 7.9 22.8 7.3 MALKER LAKE BASIN TO 293000 EAST WALKER RIVER NEAR BRIDGEPORT, CALIF. (LAT 38 19 40 LONG 119 12 50) B COMPAN 22 6 7 7 7 7 7 8 80 7.3 MALKER LAKE BASIN TO 293000 WEST WALKER RIVER NEAR COLEVILLE, CALIF. (LAT 38 22 47 LONG 119 26 57) B COLUMN 22 6 7 7 7 7 7 8 7 8 80 7 8 8 8 8 8 8 8 8 8		102611	OO MUJAVE	RIVER AT	THE FORK	S, NEAR C	EDAR SPRI	NGS, CALIF	(LAT 3	4 20 35 LU	ING 117 14	01)	
21 3 30 161 6.52 92 0 33 1.0 272 8.0 9.4 11.7 APR 16 5 40 142 9.58 80 0 33 .9 241 8.0 11.7 10.4 JUL 23 19 140 247 5.80 99 0 47 1.9 397 6.9 22.8 6.5 10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CALIF. (LAT 34 34 23 LONG 117 19 11) <sup>B</sup> OCT 20 4.2 60 280 30.2 125 0 40 1.7 479 7.9 18.3 7.7 JAN 21 6.7 70 314 31.4 124 0 39 1.8 514 8.3 15.6 8.8 APR 16 7.8 80 304 31.2 141 0 38 1.6 491 8.1 15.6 8.2 JUL 23 3.5 110 309 11.7 159 0 38 1.6 518 7.9 22.8 7.3  WALKER LAKE BASIN  10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CALIF. (LAT 38 19 40 LONG 119 12 50) <sup>B</sup> APR 16 E 88 192 F7.9 8.0 9.3 SEP 22 G 80 213 F7.6 14.0 7.6  10296000 WEST WALKER RIVER NEAR COLEVILLE, CALIF. (LAT 38 22 47 LONG 119 26 57) <sup>B</sup> APR 16 H 31 7 74 F7.3 3.5 10.6 SEP 22 J 48 130 F8.0 11.0 10.4 E INCLUDES 20 MG/L OF TURBIDITY.	20	.3	30	160	5.62	92	0	36	1.1	284	8.0	11.7	9.7
16		.3	30	161	6.52	92	0	33	1.0	272	8.0	9.4	11.7
JUL 23 19 140 247 5.80 99 0 47 1.9 397 6.9 22.8 6.5  10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CALIF. (LAT 34 34 23 LONG 117 19 11) <sup>B</sup> OCT 20 4.2 60 280 30.2 125 0 40 1.7 479 7.9 18.3 7.7  JAN 21 6.7 70 314 31.4 124 0 39 1.8 514 8.3 15.6 8.8  APR 16 7.8 80 304 31.2 141 0 38 1.6 491 8.1 15.6 8.2  JUL 23 3.5 110 309 11.7 159 0 38 1.6 518 7.9 22.8 7.3  WALKER LAKE BASIN  10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CALIF. (LAT 38 19 40 LONG 119 12 50) <sup>B</sup> APR 16 E 80 192 F7.9 8.0 9.3  APR 16 H 80 213 F7.6 14.0 7.6  E 10296000 NEST WALKER RIVER NEAR COLEVILLE, CALIF. (LAT 38 22 47 LONG 119 26 57) <sup>B</sup> APR 16 H 48 74 F7.3 3.5 10.6  SEP 22 J 48 130 F8.0 11.0 10.4  E INCLUDES 20 MG/L OF TURBIDITY.		.5	40	142	9.58	80	0	33	.9	241	8.0	11.7	10.4
10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CALIF. (LAT 34 34 23 LONG 117 19 11) <sup>B</sup> OCT 20 4.2 60 280 30.2 125 0 40 1.7 479 7.9 18.3 7.7  JAN 21 6.7 70 314 31.4 124 0 39 1.8 514 8.3 15.6 8.8  APR 16 7.8 80 304 31.2 141 0 38 1.6 491 8.1 15.6 8.2  JUL 23 3.5 110 309 11.7 159 0 38 1.6 518 7.9 22.8 7.3  WALKER LAKE BASIN  10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CALIF. (LAT 38 19 40 LONG 119 12 50) <sup>B</sup> APR 16 E 88 192 F7.9 8.0 9.3  SEP 22 G 80 213 F7.6 14.0 7.6  APR 16 H 31 74 F7.3 3.5 10.6  SEP 22 J 48 74 F7.3 3.5 10.6  SEP 22 J 48 130 F8.0 11.0 10.4  E INCLUDES 20 MG/L OF TURBIDITY.	JUL									397	6.9	22.8	6.5
OCT 20 4.2 60 280 30.2 125 0 40 1.7 479 7.9 18.3 7.7 20 4.2 60 280 30.2 125 0 40 1.7 479 7.9 18.3 7.7 20 4.2 60 280 30.2 125 0 40 1.7 479 7.9 18.3 7.7 20 4.2 60 280 31.4 31.4 124 0 39 1.8 514 8.3 15.6 8.8 16. 16. 17.0 15.0 15.0 15.0 15.0 15.0 15.0 15.0 15												9 11) <sup>B</sup>	
20	ост												
21 6.7 70 314 31.4 124 0 39 1.8 514 8.3 15.6 8.8 APR 16 7.8 80 304 31.2 141 0 38 1.6 491 8.1 15.6 8.2 JUL 23 3.5 110 309 11.7 159 0 38 1.6 518 7.9 22.8 7.3 WALKER LAKE BASIN TO SEP 10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CALIF. (LAT 38 19 40 LONG 119 12 50) B APR 16E 68 192 F7.9 8.0 9.3 SEP 22G 80 213 F7.6 14.0 7.6 10296000 NEST WALKER RIVER NEAR COLEVILLE, CALIF. (LAT 38 22 47 LONG 119 26 57) B APR 16H 31 31 74 F7.3 3.5 10.6 SEP 22J 48 130 F8.0 11.0 10.4 E INCLUDES 20 MG/L OF TURBIDITY.	20	4.2	60	280	30.2	125	0	40	1.7	479	7.9	18.3	7.7
16 7.8 80 304 31.2 141 0 38 1.6 491 8.1 15.6 8.2 JUL 23 3.5 110 309 11.7 159 0 38 1.6 518 7.9 22.8 7.3 WALKER LAKE BASIN  10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CALIF. (LAT 38 19 40 LONG 119 12 50) <sup>B</sup> APR 16E 68 192 F7.9 8.0 9.3 SEP 22G 80 213 F7.6 14.0 7.6 10296000 WEST WALKER RIVER NEAR COLEVILLE, CALIF. (LAT 38 22 47 LONG 119 26 57) <sup>B</sup> APR 16H 31 74 F7.3 3.5 10.6 SEP 22J 130 F8.0 11.0 10.4	21	6.7	70	314	31.4	124	0	39	1.8	514	8.3	15.6	8.8
23 3.5 110 309 11.7 159 0 38 1.6 518 7.9 22.8 7.3  WALKER LAKE BASIN  10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CALIF. (LAT 38 19 40 LONG 119 12 50) <sup>B</sup> APR 16E 68 192 F7.9 8.0 9.3  SEP 22G 80 213 F7.6 14.0 7.6  10296000 WEST WALKER RIVER NEAR COLEVILLE, CALIF. (LAT 38 22 47 LONG 119 26 57) <sup>B</sup> APR 16H 31 74 F7.3 3.5 10.6  SEP 22J 48 130 F8.0 11.0 10.4  E INCLUDES 20 MG/L OF TURBIDITY.	16	7.8	80	304	31.2	141	0	38	1.6	491	8.1	15.6	8.2
APR 16E 80 213 F7.6 14.0 7.6  10296000 NEST WALKER RIVER NEAR COLEVILLE, CALIF. (LAT 38 19 40 LONG 119 12 50) <sup>B</sup> APR 16F 80 213 F7.6 14.0 7.6  10296000 NEST WALKER RIVER NEAR COLEVILLE, CALIF. (LAT 38 22 47 LONG 119 26 57) <sup>B</sup> APR 16H 31 74 F7.3 3.5 10.6  SEP 22J 48 130 F8.0 11.0 10.4  E INCLUDES 20 MG/L OF TURBIDITY.	23	3.5	110	309	11.7	159	0	38	1.6	518	7.9	22.8	7.3
APR 16E 68 192 F7.9 8.0 9.3 SEP 22G 80 213 F7.6 14.0 7.6  10296000 WEST WALKER RIVER NEAR COLEVILLE, CALIF. (LAT 38 22 47 LONG 119 26 57)  APR 16H 31 74 F7.3 3.5 10.6 SEP 22J 48 130 F8.0 11.0 10.4  E INCLUDES 20 MG/L OF TURBIDITY.													
16E 68 192 F7.9 8.0 9.3 SEP 22G 80 213 F7.6 14.0 7.6    10296000 NEST WALKER RIVER NEAR COLEVILLE, CALIF. (LAT 38 22 47 LONG 119 26 57) B  APR 16H 31 74 F7.3 3.5 10.6 SEP 22J 48 130 F8.0 11.0 10.4 E INCLUDES 20 MG/L OF TURBIDITY.			10293000 E	AST WALKER	RIVER N	EAR BRIDG	EPORT, CA	LIF. (LAT	38 19 40	LONG 119	12 50) <sup>B</sup>		
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APR 16H 31 74 F7.3 3.5 10.6 SEP 22J 48 130 F8.0 11.0 10.4  E INCLUDES 20 MG/L OF TURBIDITY.	SEP								~-				
APR 16H 31 74 F7.3 3.5 10.6 SEP 22J 48 130 F8.0 11.0 10.4 E INCLUDES 20 MG/L OF TURBIDITY.	226		1020/055									14.0	1.0
16H 31 74 F7.3 3.5 10.6 SEP 22J 48 130 F8.0 11.0 10.4 E INCLUDES 20 MG/L OF TURBIDITY.	400		T05A6000	WEST WALK	CEK KIVER	NEAR COL	EVILLE, C	ALIF. (LA)	1 38 22 4	r LUNG 119	26 311		
22J 48 130 F8.0 11.0 10.4 E INCLUDES 20 MG/L OF TURBIDITY.	16H					31			~	74	F7.3	3.5	10.6
E INCLUDES 20 MG/L OF TURBIDITY.						48				130	F8.0	11.0	10.4
	E INC	LUDES 20	MG/L OF TU	RBIDITY.									

E INCLUDES 20 MG/L OF TURBIDITY.
F FIELD DETERMINATION.
G INCLUDES 70 MG/L OF TURBIDITY.
H INCLUDES 4 MG/L OF TURBIDITY.
J INCLUDES 1 MG/L OF TURBIDITY.

### ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS IN THE GREAT BASIN

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	ALKA- LINITY AS CACO3 (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)
					CARSO	N RIVER 1	BASIN					
	1030	8200 EA	ST FORK CA	RSON RIVE	R NEAR MA	ARKLEEVILI	LE, CALIF.	(LAT 38	42 50 L0	NG 119 45	50) <sup>B</sup>	
APR 16 SEP	1000	425	10	2.9	6.7		52	0			2.8	
22	1000	68	12	2.9	7.8		63	0			3.3	
	10	310000	WEST FORK	CARSON RI	VER AT WO	ODFORDS,	CALIF. (L	AT 38 46	10 LONG	119 49 55	) B	
APR 16	0930	188	6.2	2.1	3.0		34	0			1.0	
SEP 22	0900	26	7.6	1.7	3.8		40	0			.5	
				PYRAMID	AND WIN	NEMUCCA L	AKES BASI	N				
		103	46000 TRU	CKEE RIVE	R AT FARA	D, CALIF	. (LAT 39	25 41 LO	NG 120 01	59)B		
APR 17 SEP	0930	695	8.2	2.8	3.8	1.4	44	0	36	3.3	3.3	
23	0730	570	9.7		6.1		52	0	43		2.4	
		10	347800 PE	AVINE CRE	EK NEAR R	RENO, NEV	. (LAT 39	32 35 LO	NG 119 51	55)		
DEC 21C JAN	1345	.10	20	4.5	7.8	3.1	74	0		19	1.4	.5
16D	1015	.70	17	6.7	9.5	2.8	14	0		71	1.6	.2

B DATA FURNISHED BY CALIFORNIA DEPARTMENT OF WATER RESOURCES AND REVIEWED BY U.S. GEOLOGICAL SURVEY. C INCLUDES 32 MG/L OF SILICA (S102).

INCLUDES 19 MG/L OF SILICA (S102).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DATE	NITRATE (NO3) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (TONS PER DAY)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	SPE- CIFIC CON- DUCT ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)
					CARSON	RIVER B	ASIN					
	1020	8200 EAS	T FORK CA	ARSON RIV	ER NEAR MA	RKLEEVIL	LE, CALIF.	(LAT 38	42 50 LON	G 119 45	50)	
APR												
16K SEP					37				99	F7.5	1.5	11.0
22J					42				119	F7.5	9.0	10.2
	103	10000 WE	ST FORK O	ARSON RI	VER AT WOO	DFORDS,	CALIF. (LA	T 38 46	LO LONG 11	9 49 55)		
APR												
16H SEP					24				56	F7.4	1.0	11.3
22J					26				70	F7.3	7.0	10.2
				PYRAI	MID AND WI	NNEMUCCA	LAKES BAS	IN				
		10346	000 TRU	KEE RIVE	R AT FARAD	, CALIF.	(LAT 39 2	5 41 LON	3 120 01 5	9)		
APR												
17	•00	0	59	111	32	0	20	• 3	83	7.9	6.0	10.4
SEP 23					34	0	35	.5	97	7.9	11.0	9.6
		1034	7800 PEAN	VINE CREEK	NEAR REN	O, NEV.	(LAT 39 32	35 LONG	119 51 55	)		
DEC												
21 JAN		110	L124						177	7.4		
16		100	M155						206	6.7		

F FIELD DETERMINATION.
H INCLUDES 4 MG/L OF TURBIDITY.
J INCLUDES 1 MG/L OF TURBIDITY.
K INCLUDES 6 MG/L OF TURBIDITY.
L SUM OF CONSTITUENTS, 135 MG/L.

WATER

SUSPENDED-SEDIMENT DISCHARGE MEASUREMENTS AND PARTICLE-SIZE DISTRIBUTION, MATER YEAR OCTOBER 1969 TO SEPTEMBER 1970 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE; V, VISUAL-ACCUMULATION TUBE; W, IN DISTILLED MATER)

		WATER								PARTI	CLE :	SIZE					
		TEM-			SUSPENDED												METHOD
		PERA-		CONCEN-	SEDIMENT	PERCE	NT F	INER 1	T NAH	HE SI	IZE (	IN MIL	LIMET	TERS)	INDI	CATED	OF
		TURE	DISCHARGE	TRATION	DISCHARGE												ANALY-
DATE	TIME	(°C)	(CFS)	(MG/L)	(TONS/DAY)	.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	SIS
				P	YRAMID AND	MINNEM	IUCCA	LAKES	BASI	N							
			10347800	PEAVINE	CREEK NEAR	RENO,	NEV.	(LAT	39 32	35 L	LONG :	119 51	L 55)				
DEC 21 1969		4.5	E.10	6530	AE 1.8												
JAN 14 1970		4.0	.03	9030	A .73	74	77	83	92	97	100						SPWC
JAN 16		4.5	.86	1200	A 2.8	92	95	97	98	99	100						SPWC
JAN 16		4.5	1.2	1390	A 4.5												
JAN 16	1200	4.5	1.2	1460	A 4.7												
JAN 16		4.5	1.2	1490	A 4.8												
JAN 16		4.5	1.3	1450	A 5.1	83	89	98	98	98	100						SPWC
JAN 16		4.5	1.3	1450	A 5.1												
JAN 16		4.5	1.3	1420	A 5.0												
JAN 17	0945	.3.5	1.4	1020	A 3.9	94	96	97	98	98	100						SPWC
JAN 17	1150	4.5	1.7	909	A 4.2												
JAN 17		5.0	1.7	756	A 3.5												
JAN 19	1400		.51	402	A .55												
JAN 21		7.0	.15	281	A .11												
JAN 22	0930	7.0	.15	251	A .10												
JAN 23	1215	6.0	• 05	216	A .03												
JAN 25	1445	4.5	1.1	726	A 2.2												
JAN 26	0950	3.0	.67	594	A 1.1												
JAN 29	1425	4.0	.67	368	A .67												
FEB 4	1345	6.5	.05	536	A .67												
FEB 18	1600	5.0	.01	82	A 0												
			10351700	TRUCKEE R	IVER NEAR N	IXON,	NEV.	(LAT	39 46	40 L	LONG :	L19 20	10)				
OCT 5 1969		10.0	45	6	.73												
NOV 10		9.0	37	3	.30												
DEC 15		6.5	33	2	.18												
DEC 22		5.0	2010	797	4330	27	37	48	61	71	77	90	100				VPWC
JAN 17 1970	1230	4.0	3530	894	8520	21	28	36	43	51	60	74	93	99	100		VPWC
JAN 17		4.0	3280	732	6480												
JAN 19		4.5	1780	164	788												
JAN 22		5.0	5770	2380	37100	18	20	26	35	43	54	77	93	99	100		VPWC
JAN 22		5.5	5980	2090	33700												
JAN 23	0930	5.5	4280	862	9960												
JAN 25		3.5	4930	620	8250	13	17	23	28	35	43	59	83	99	100		VBWC
FEB 24		7.0	1910	90	464												
MAR 30		5.5	691	23	43												
MAY 4		19.0	140	11	4.2												
JUN 1	1330	16.5	206	53	29												
JUL 2		15.5	1070	94	272												
AUG 5			81	22	4.8												
SEP 3	1400	20.0	78	12	2.5												

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